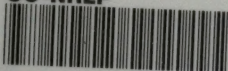


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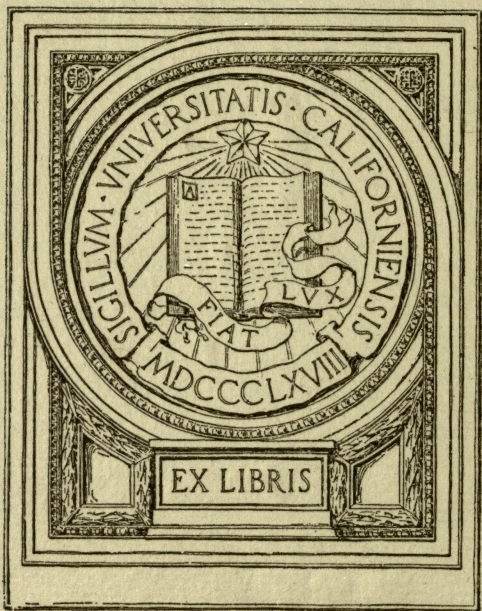


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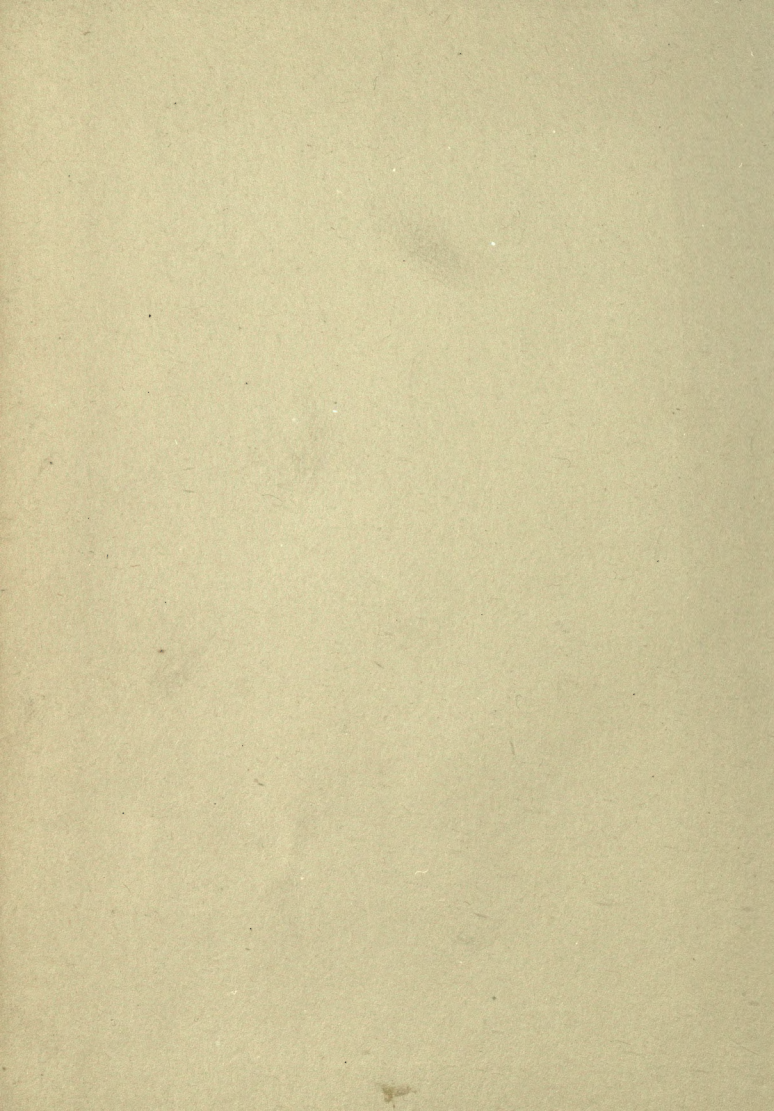
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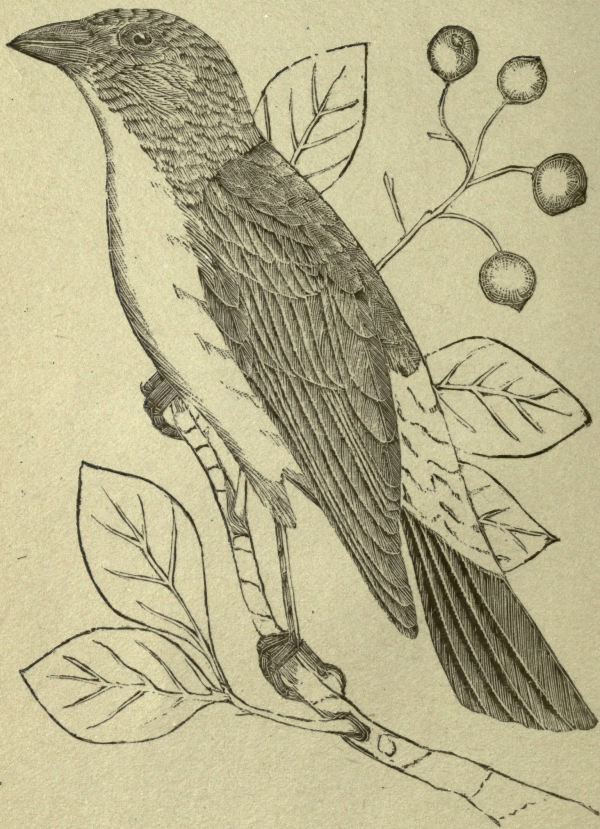


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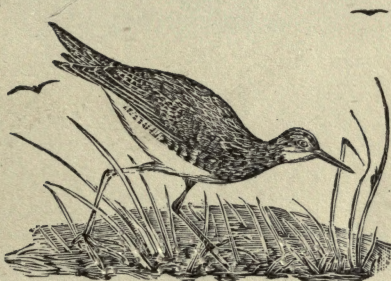
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A
FIELD ORNITHOLOGY

OF THE BIRDS OF
EASTERN NORTH AMERICA

BY

Charles J. Maynard
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C. J. MAYNARD WEST NEWTON MASS.

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W. H. BAKER
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DEDICATED
TO ALL WHO LOVE
TO STUDY
LIVING BIRDS

377900

VALEDICTORY

This book, begun six years ago, has greatly exceeded in number of pages the original intentions of the author, but this will not, he trust, prove disadvantageous to the reader.

As the title indicates, all the birds, excepting perhaps a few very recently described forms, which occur between the North Pole and the Gulf of Mexico, east of the Mississippi River, are given. As the natural geographical western avifaunal boundaries are the Great Plains, most of the species which occur east of them are herein included.

In its scope as an exponent of field characters it may be regarded as a companion to my Directory to the Birds of Eastern North America.

C. J. M.

West Newton, April, 1916.

PREFACE.

Among the many books written on birds it will be difficult to find one which deals wholly with these beautiful and interesting creatures as they are seen in the field. Professional ornithologists must, of course, study external and internal characters of birds from the specimens themselves in the hand, but to-day there is another class of ornithologists, who by far outnumber the professional, and who want to know living birds as they appear among the foliage of woodlands and shrubbery, on the shore, or upon the waters of lake, pond, and river, or upon the wide ocean. This class want a book that shall teach them how they can identify these birds as they perch, or fly, or swim. It is evident that such a book, in order to fulfill its mission, should be written by one who has had a wide experience with living birds.

While he who now undertakes this work does not claim that he knows living birds as well as he could wish, he has had a wide field experience with them ; an experience extending over half a century, for forty years of which he has been a teacher in bird study.

The author's plan for this book is, to give only such points in form, flight, habits, and color which can readily be seen with an ordinary bird glass, which will serve to identify the species observed, rigidly excluding all others. In short, points that he has been teaching his pupils to see when they have been with him in the field. It goes without saying, that those most conclusive means of identification, the songs or other sounds uttered by birds will not be omitted. Breeding habits nests and eggs and the young will also be noticed. The figures beneath the cuts indicate the comparative size; if there is none, the cut is life size.

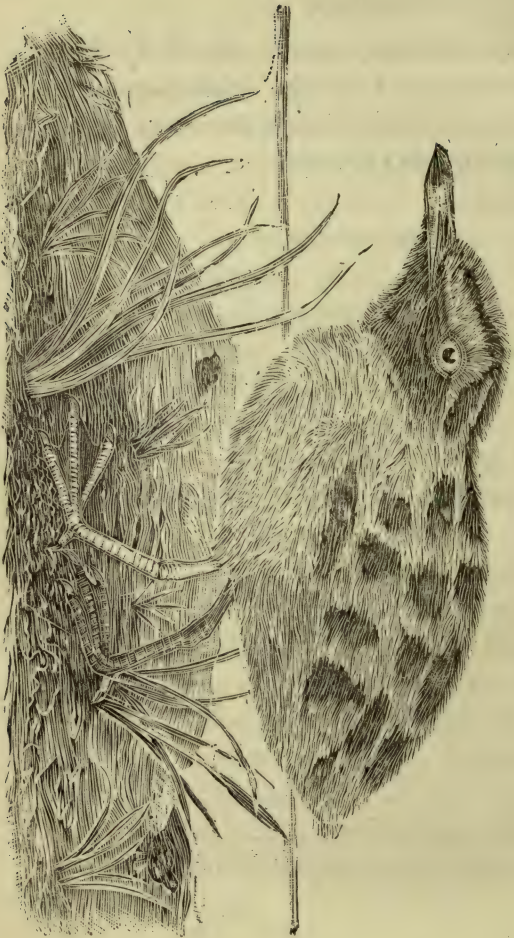
In concluding the author wishes to give credit for the idea from which this book orig-

inated to his life-long friend, Mr. T. O. Fuller of Needham, and for the encouragement to begin its publication now to many other members of his bird classes.

C. J. M.,

WEST NEWTON,

NOV., 1909.



YOUNG OF COMMON TERN.

WATER BIRDS.

By these we mean those birds which live on or near water, both salt and fresh, and which obtain their subsistence from it. They are of diverse forms and habits as will be seen as we proceed. They also belong to widely different groups. While none are given under this head which live away from water, some which do occur about it are excluded in order not to break up natural groupings. Examples of these may be found in the Kingfishers, Ospreys, Phalaropes, Coots, and Gallinules. Most of the species included in this section swim well, but exceptions to this rule may be found in the Frigate Birds which would be as helpless as swallows if they found themselves in the water. Partial exceptions are seen in the Terns, but these will be mentioned later. Most of the young are covered with down when hatched, see plate I for an example.

GREBES.

Are birds which are seen upon both salt and fresh water, which when suddenly frightened dive instantaneously and rarely fly. They may be distinguished from most Ducks by the short form, absence of tail, shown in the rounded rump, more slender neck, and pointed bill. This last named can be seen by close observation almost as far as the bird can be distinguished. From Coots, which they somewhat resemble, they may be known by the light colors beneath; Coots are dark all over.

Grebes ride lightly upon the water and carry their heads well over their backs, see figs. 1 and 3, thus differing from Loons which swim low and carry their heads forward. If approached slowly, Grebes sink gradually, sometimes leaving the head and neck exposed. But when suddenly alarmed, they dive like a flash, and if much frightened, will not reappear for a long time, or will only put their bills out of water in order to breath.

Occasionally when startled they patter along the water, using wings and feet. This movement sometimes ends in flight or a dive. On account of their rather singular behavior, these interesting birds are popularly called Water Witches, and more objectionably, Devil Divers and Hell Divers.

The flight is swift and direct, with neck and feet outstretched. They never dive from the air, nor do they ever voluntarily appear on land, and cannot rise in flight from it, although they can walk and even run. Their cries, which are usually heard in spring, are weird, hollow, and quavering.

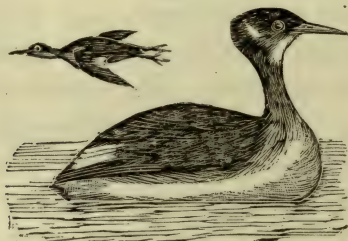
The nests, which are placed among reeds on inland bodies of water, are usually floating. Eggs, 6 to 8, greenish, covered with a chalky incrustation which is usually much stained. Young, active when hatched, and follow their parents. They are streaked with whitish and dark brown.

Although some species of Grebes are gregarious in habit, all at times, occur singly. The males are larger than the females.

1. HOLBOELL GREBE

Our largest species, 18 to 20. The bill is large, fig. 2, hence the head looks large, and when the bird is alarmed is carried well up, thus straightening the neck, fig 1. The

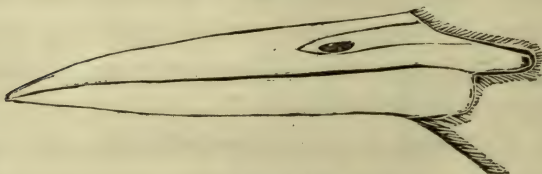
Fig. 1.



Holboell Grebe. 1-14.

dark back is relieved by the whitish under parts, but the neck shows grayish in front.

Fig. 2.



Bill of Holboell Grebe.

The cheeks and sides of head below the eyes are decidedly gray, but there is a lighter spot on either side of the back part of the head, yet this cannot be seen at any great distance. The bird must also be fairly near to see that the bill is partly yellow and that it is about as long as the head. There is a white patch on the wing that may sometimes be seen when the bird is swimming and always as it rises upright on the water to flap its wings, or flies, see fig. 1. In spring the neck shows some reddish. Not uncommon on salt water and occasionally on fresh, either singly or in small companies, from Oct. 15 to May 15 from Me. to N. J. Breeds in the Arctic.

2. HORNED GREBE.

Much smaller than the Holboell, 12 to 15. Carries the head low and even when alarmed does not straighten the neck wholly, fig. 3. Is much more silvery white on breast, neck in front, and on entire cheeks below eye, extending so far on back of head as to nearly form a collar there. The bill is shorter than

the head, see fig. 4, and darker than that of the Holboell; the bird must be near, however, in order to see this, yet I have known this species to be so tame that even the red

Fig. 3.

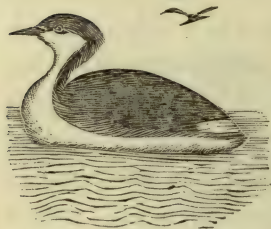


Fig 4.



Horned Grebe. 1-14

Bill of Horned Grebe.

eye could be seen. There is a white patch on the wing much as in the larger species.

In diving the Horned Grebe quite often springs out of water. It occurs in large numbers on salt water along the coast, and in bays and estuaries, seldom singly, usually in small companies, but not infrequently in flocks of twenty or more, and is sometimes seen on fresh water. It is by far our most common species, being quite abundant during the fall

migration in October and early November. Some remain as far north as Mass., but the majority pass the cold season between southern N. E. and Fla.

Fig. 5.



Horned Grebe in summer. 1-2.

In May this species assumes the elongated feathers of the head which gives it the name of Horned Grebe, see fig. 5. The head is then black above and below, with a broad line of chestnut on its side which passes through eye. The neck is also chestnut in front and this color extends down on the sides of body. These colors can easily be seen at some distance. Breeds chiefly north of U. S.

In studying the two foregoing species of Grebes, experience will teach that while one may mistake a Horned for a Holboell, one rarely, if ever, mistakes a Holboell for a Horned.

3. PIED-BILLED GREBE.

About the size of the Horned Grebe, but this is our only species that has the head and neck all around decidedly reddish brown in

Fig. 6.



Pied-billed Grebe in winter. 1-4.

autumn and winter, and this color extends along the sides. The throat and under parts are silvery white, see fig. 6. The bill is thick and large, about the size and form of that of a domestic hen. It is brown in winter, but becomes whitish in summer with a black band

crossing the middle which can easily be seen at some distance, see fig. 7, and which gives it the name of Pied-billed Grebe. It is also called Dabchick. The throat is then black.

Fig. 7.

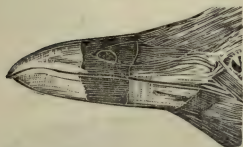


Fig 8.



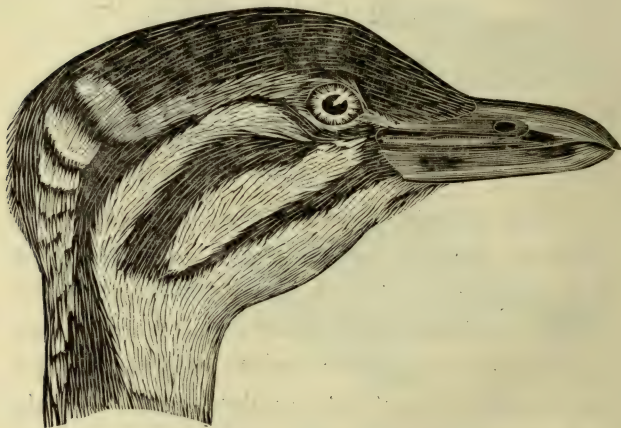
Pied-billed Grebe in summer; bird 1-15.

The young when fully grown retain the stripings on the head, see fig. 9, but the neck is reddish brown much as in the adult.

The Pied-billed Grebe may be found on almost any fresh water stream or pond, if a little remote from habitations and contain aquatic vegetation into which the bird may retreat when alarmed. It is very rarely found on salt water. It is very common, especially in Sep. and Oct. in northern U. S. It winters from the Carolinas, southward, and breeds from Fla., northward into Canada. Migra-

tion in spring takes place in April upon the breaking up of the ice. For the differences between the Pied-billed Grebe and the Ruddy Duck, see that species.

Fig. 9.

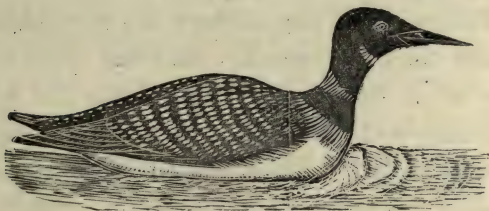


Head of young Pied-billed Grebe taken Aug. 27.

LOONS.

Occur on both fresh and salt water in summer, but are more common on the latter named in winter. They may be distinguished from ducks by the pointed bill, long form, and habit of sitting low on the water. This last mentioned habit, their method of carrying their head in advance of the body, not often over it, see fig. 10, and the presence of a tail, which although short, can easily be seen,

Fig. 20.



Loon, 1-10.

will at once distinguish them from Grebes.

Loons dive instantaneously when much alarmed, and can rarely be made to fly. They slip under water with the utmost ease, leav-

ing hardly a ripple behind, and occasionally may be seen with the head and neck only above the surface.

The flight is swift and direct. The wings are saber-shaped and look small for the large body; but they amply serve their purpose, and a great Loon dashing through the air with the velocity of a hundred miles an hour is a fine example of gravity largely overcome by speed. The feet and neck are outstretched in flight, fig. 11. They cannot rise into air excepting from water, and then are obliged to flutter along the surface for some distance before they can start. In calm water they may often be seen paddling along the surface by using both feet and wings, "steamboating" as it is called. They do this sometimes in chasing one another, apparently in sport.

Although the nests are placed on land, they are never far from water, as the birds cannot walk on land, but are obliged to drag themselves along by using wings and feet. Eggs, 2, dark greenish brown heavily spotted

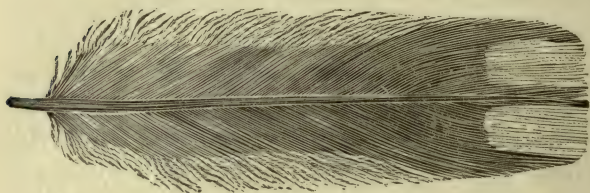
with black. The young are active when hatched and covered with down, dark-brown above and whitish beneath. They dive well when quite small, but when very young are frequently carried about on the backs of their parents. Both sexes are similar.

4. LOON.

Our largest species, 32. Easily recognized in summer by the black head and neck. There are white markings on the neck as given in the figure on page 15, which, however, cannot be discerned any great distance, but the white spots on the black back are more easily seen. These are nearly square in form, and are arranged in pairs at the extremity of each feather or near it, fig 12. The bird is white beneath, which may be best seen as it rises to flap its wings or turns partly over when preening itself. In winter, when the head and neck are dusky above and white beneath, it may be known from the Red-throated Loon by the superior size and absence of

spots above, fig. 11. The bill is proportionately heavier and the head looks larger. The neck and back also look darker, and the duskiness extends down on the sides of the head.

Fig. 12.



Feather from back of Loon in somewhat worn summer dress.

The weird cries of the Loon are given throughout the year, but are more varied in summer. At night a single wailing note, like "*Where*" is uttered; to this sometimes added another note, "*are*". At early dawn a shorter sound is heard, terminating these, and given with a rising inflection; all together then become, "*Where are you?*" The alarm note, night or day, is, "*Wa-ou-ou-ar*", given nearly as one continuous cry; the flight

utterance, heard frequently in summer, is, "Go-o-o-along". Besides these cries, all of which are given in a minor tone, Loons converse when together by emitting low sounds. They may be often attracted toward the shore by waving anything white, like a handkerchief, and will usually answer a good mimicry of their cries.

Fig. 11.

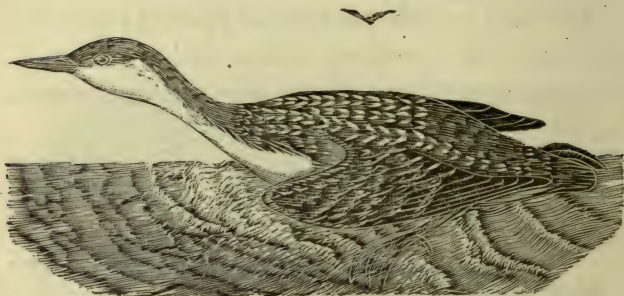


Loon in winter dress, 1-8.

Common in winter on salt water along the coast from Me. to the Carolinas. Rare in Fla. Breeds from northern U. S. northward on the borders of lakes and ponds. Occasionally found on fresh water during the autumn.

nal migrations in Sep. and Oct. Returns north in April.

Fig. 13.



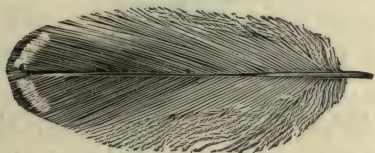
Red-throated Loon in winter dress, "steamboating". 1-6.

5. RED-THROATED LOON

Smallest of our Loons, 26. Differs from the Loon in being decidedly lighter in color, especially on head and neck. In summer it has triangular red patch on the throat, and this is sometimes (though rarely) retained in autumn. In winter the white of the throat extends up on the sides of the head to the

eye and a little higher behind it, fig. 13. The back is always marked with white spots arranged in pairs much as in the Loon, but they are long, narrow, and placed obliquely with the vein of the feather, fig 14. In comparing this Loon with the Holboell Grebe,

Fig. 14.



Back feather of Red-throated Loon in winter dress.

it is well to remember that while the Grebe at first usually springs upward in diving, the Loon simply slips under water.

This species is less suspicious than the Loon, and sometimes comes quite near shore. Two or three years ago, when the harbor off Winthrop, Massachusetts, was filled with them, some came so near the sea wall, the tide being high, that they could be seen under water as they dove in pursuit of fish, and

their method of using their wings as propelling agents could also be seen, fig. 15.

Fig. 15.



Red-throated Loon flying under water

The cries of the Red-throated Loon are not dissimilar to those of the Loon. It breeds from the Gulf of St. Lawrence, northward, chiefly along the coast; wintering from Mass. southward, when it is found off the coast, in bays, sounds, etc. Occasionally occurs on fresh water. Very common in New England in Nov. Migrates south in Sep. and Oct.; north in April. Common names for it are, Cape Race and Scape-grace.

6. BLACK-THROATED LOON.

Intermediate in size between the Loon and the Red-throated Loon, about 28. Head and neck above, grayish, but the throat and neck below are black, with longitudinal white lines down the neck between it and the gray. The back is black with small ovate spots of white. The young have the neck grayish in front and the back unspotted, but with each feather broadly margined with bluish white, giving the back a scaly appearance. Breeds in the Arctic regions; south in winter to extreme northern United States only, where it is exceedingly rare. While there does not appear to be any authentic record of this uncommon species having been seen in the United States, it may be well to watch for it, especially on the coast, as it could be easily overlooked.

AUKS, MURRES, PUFFINS, ETC.

A group of birds with bills of varying forms, but all agreeing in having rather short bodies and necks, and by these characters may be distinguished from all other water birds. They all occur on the ocean and all swim and dive well. They sit upright when on land, fig. 14; some walk well, others move with a waddling gait. The wings are short,

Fig. 16.



Razor-billed Auk in summer dress. 1-8.

but the flight is swift and direct, with very rapid wing-beats. The birds move with a

swaying motion when flying—thus differing from other water birds—and can wheel readily in air. The horny outer covering of the bill is moulted in some of the species, hence the bill is of a different form in winter than in summer. All assume a special winter plumage. They nest in cavities on cliffs or rocky islands, but some species often excavate holes for themselves. The young are hatched covered with down, but are comparatively helpless and are fed by regurgitation.

7. RAZOR-BILLED AUK.

Size about that of the Ruddy Duck, 16 ; like that species it often holds its tail up when swimming. The Razor-bill, however, has a much shorter neck than that of any duck, while its singular bill will always serve to distinguish it when adult, fig. 16. This, and its manner of carrying its tail, are the only characters by which it may be known from the Murres when at any distance, for like it they also are black above and white beneath,

with the head all around black in summer, and with the throat white in winter, fig. 17. The Razor-bill also has a white wing band.

Fig. 17.



Razor-billed Auk in winter dress. 1-8.

In regard to the habit of cocking up its tail, it will be well to remember that the Ruddy Duck, which usually carries its tail in the same way, does not always do so in windy weather, and the Auk may follow its example. Unless the tail is always carried upright the young Razor-bills the first winter will be difficult to tell from Brunnich Murres as then the bill is comparatively slender, nearly as much so as in the Murre.

In common with the Murres, these birds are apt to sit in long lines side by side on the water, and they often fly in small flocks also side by side. Although usually silent, their cries when given are loud and harsh.

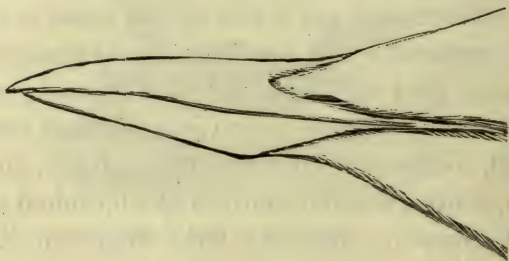
Razor-bills are found off the coast in winter, generally not far from land, sometimes so near that they may be seen from exposed sea coasts. Breeds from Grand Menan northward, nesting in rock cavities. Eggs, one or two, white, heavily spotted and blotched with dark brown. Winters from Mass. to N. J.; migrating north in early March. Very common, but not so often seen from land.

8. MURRE.

About the same size and form as the Razor-bill, but it may be known by the long, pointed bill, fig. 18. If near enough when in summer dress, the absence of the white line in front of the eye, seen in the Razor-bill may be noted. The head is soot-brown,

all around in summer, but in winter, when the throat is white, the head is quite black. Also differs from the Razor-bill when on the

Fig. 18.



Bill of Murre.

water in not cocking up its tail. In common with the two following species it breeds on the shelves of rocky cliffs from the Gulf of St. Lawrence northward. One egg only is laid. This is very large for the size of the bird, pyriform, varying in color from white to a bright blue-green, thickly spotted and lined with black. All three species when annoyed utter a murmuring note like "*Mur-r-r*"

often repeated. They are all gentle, friendly, and unsuspicious. It is possible to approach within a few yards of them at any time, and when sitting on their eggs will allow themselves to be handled without showing much fear.

Fig. 19.



Murre in winter dress. 1-6.

All of the species migrate southward in Nov. and northward in Feb. and early March. The Murre winters from northern N. E. northward off the coast. Although there does not appear to be any specimens in collections which have been taken as far south as Mass., it may occur here.

9. RINGED MURRE.

Differs from the Murre in having a white ring around the eye and a line extending back of it along the sides of the head, fig. 20. The range is the same as that of the Murre. Not very common.

Fig. 20.



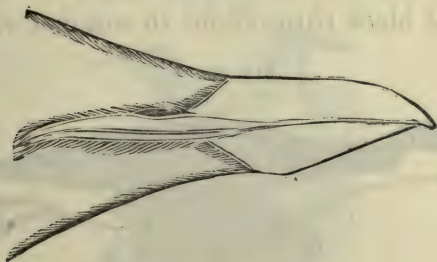
Ringed Murre in summer dress. 1-2.

10. BRUNNICH MURRE.

Differs from the Murre in having the bill shorter and thicker, with the edge of the upper mandible swollen on the basal half and yellow in color. This may be seen at some

distance, fig. 21. For comparison with the Razor-billed Auk see that species. Some

Fig. 21.



Bill of Brunnich Murre.

birds have the throat nearly black in winter, but as a rule it is white, fig. 22. The under side of the wing is white, and this shows as the bird sways in flight. This is the species which occurs off the coast of Mass. in winter, and which may often be seen from headlands or even beaches when it is migrating. Sometimes during severe storms it will seek the shelter of salt water estuaries, and is occasionally blown inland. Winters from Mass. to N. J. Summer range like that of the Murre.

11. BLACK GUILLEMOT.

The Guillemots are smaller than the Murres, 13, and differ from them otherwise in being black throughout in summer with a

Fig. 22.



Brunnich Murre in winter dress. 1-4.

large, conspicuous white wing patch, which in the Black Guillemot is wholly, or partly, divided by a black wedge, fig. 23. In winter the black above is much mixed with white in irregular mottlings, and the color below is nearly or quite white, fig. 23. The white wing patch, however, is about as conspicuous as it is in winter. The feet are crim-

son, showing in flight, or often as the bird dives, for it springs upward before plunging beneath the water. It is rather shy, even on

Fig. 23.



Black Guillemot; figure in front, summer; behind, winter. dress. 1-6.

its breeding grounds. Although the winter dress shows considerable white, this species may be distinguished from the ducks which show about as much white, like the Bufflehead and Oldsquaw, by the pointed bill and habit of carrying the head well forward when swimming. Guillemots, when at a distance, quite closely resemble floating bottles.

The Black Guillemot breeds from the coast of Me. northward, nesting in rock cav-

ities; eggs 2 to 4, white or greenish, heavily marked with black and brown. Note, when disturbed, a mournful whistle; also gives a chuckling cry. Common in winter off the coast, not far from land, from N. E. to N. J. Migrates south in early Oct., north in April. It is often called Sea Pigeon.

12. MANDT GUILLEMOT.

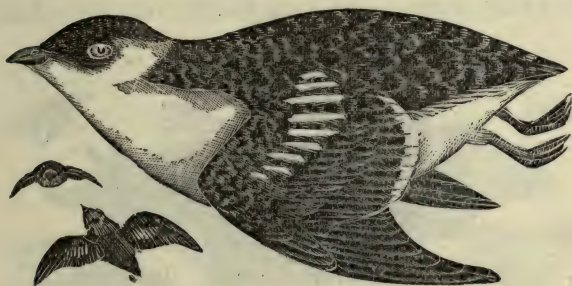
Differs from the Black Guillemot in having the white patch on the wing larger, and it is never divided by a black wedge. It breeds from the coast of Labrador, northward. Southward range in winter not well known.

13. DOVEKIE.

The smallest of the group, 8, easily recognized by its small size, short neck, and small bill. It looks tiny on the water, upon which it rides buoyantly, fig. 25. Like many of the allied species, the head is black all around in summer, but the throat is white to the bill in winter, and there is a whitish

collar around the neck, fig. 24. If near, the white tippings to the secondaries and the white stripes on the wings can be seen. The

Fig. 24.



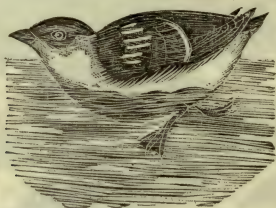
Dovekie in winter dress. 1.3.

wings are moved very rapidly in flight, and when the bird is going directly away or coming head on it resembles a winged ball. Although sometimes found singly, it more often occurs in flocks, from companies of four or five up to gatherings consisting of hundreds of individuals, but the large flocks are usually seen far out at sea.

The Dovekie dives and swims well under water. It is very unsuspicious and friendly.

If caught it is very gentle, showing no signs of fear, and may be approached quite near when on the water. It breeds in the far north, migrating south in Nov. to winter

Fig. 25.



Dovekie in winter dress. 1-8.

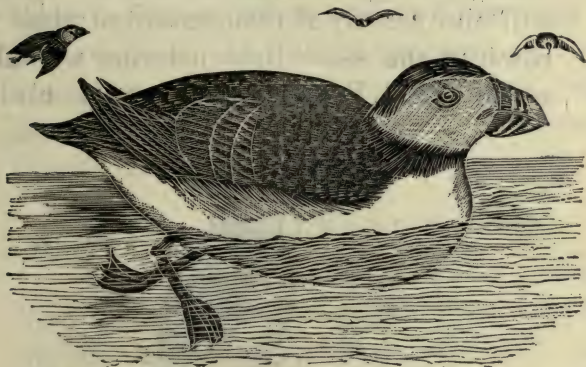
from Mass. to N. J., but usually keeps well out at sea. It is sometimes blown inland during severe storms which occur when it is migrating. Goes north in April. The single, greenish-white, unspotted egg is placed on the shelves of rocky cliffs. It is often called Little Auk, and is known to fishermen by the rather singular name of Pine Knot.

14. PUFFIN.

These odd little birds, which are about the size of Teals, 13. are easily distinguished

by the grayish white cheeks in strong contrast with the black collar around the neck, large head, much compressed, triangular, red, bill, and short neck. The top of the head and back are black and the under parts are

Fig. 26.



Puffin in summer dress. 1-4.

white, fig. 26. The winter adults and young have the bill smaller and dark in color, but it is always triangular in form.

The Puffin rides lightly on the water and is very expert in diving. Flight very

very swift, with rapid wing beats and with a slight swaying motion.

At all times it is very tame, allowing a near approach, and on its breeding grounds is even more fearless. Although peaceable, friendly birds, they resist being handled, and will bite fiercely if removed from their burrows, at the same time uttering a croaking sound. The Puffins are the only birds of

Fig. 27.



Puffin in summer dress. 1-8.

this group which stand upright on their toes, without touching the tarsi to the ground, fig. 27.

The Puffin breeds from the Bay of Funday northward, nesting in holes of rocky cliffs or in burrows which it excavates for itself in the soil on the surface of islands. The single egg is white, usually much stained, occasionally mottled with greenish. Migrates south in Oct. to winter from off the coast of N. E. to N. J. At this season keeps well out to sea, only occasionally approaching very near land. Goes north in April. Common. It is often called Sea Parrot and Paroquet.

15. LARGE-BILLED PUFFIN.

Not to be distinguished at any distance from the Puffin, the only difference being the slightly larger size and proportionately larger bill. Breeds in the Arctic regions; southward range in winter not well known.

16. TUFTED PUFFIN.

Differs from the Puffin in being sooty gray beneath, instead of white, in all stages of plumage. In the breeding season the sides

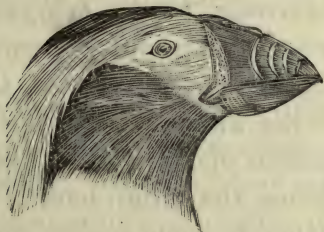
Fig 29



Young Audubon Shearwater two days old.

of the head are ornamented by pendant tufts of silky, straw-colored feathers, fig. 28. It

Fig. 28.



Tufted Puffin. 1-2.

breeds on the coasts and islands of the North Pacific; accidental in the Bay of Funday and Kennebeck River, Me.

17. ANCIENT MURRELET.

A small, auk-like bird, 10 inches long, with form and color much like the Dovekie, but with a broad stripe of white on either side of the back of the head. Coasts and islands of the North Pacific. Accidental in Wisconsin.

TUBE-NOSED SWIMMERS.

These are ocean-inhabiting birds of varying sizes. The wings are long and narrow. The flight is strong, but the wings are moved rather slowly with a peculiar downward beat. In this group are found some of the strongest flying birds known. The bill is hooked with the nostrils opening into tubes, figs. 30 and 32, whence the group name. All swim well, and although some species pursue their

Fig. 30.



Bill of Fulmar.

prey beneath the water, none are expert divers. When annoyed, some eject an oily fluid from the mouth, which has a strong, rather disagreeable odor. Food, fishes, squid,

and oily refuse cast into the water by fishermen and whalers. Egg, single, white; young, downy when hatched, but are at first helpless and fed by regurgitation, fig, 29.

ALBATROSSES.

Very large birds which live upon the open ocean, remote from continental land. The wings are very long and narrow. The nests are mound-like structures placed on oceanic islands. All of the species occur in the Pacific or oceans of the southern hemisphere; accidental elsewhere.

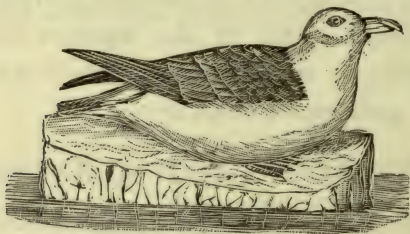
18. YELLOW-NOSED ALBATROSS.

Size, large, 36. Grayish throughout, with the rump and upper tail coverts white. There is a dark spot before the eye and behind it. Bill, yellow. Occurs in the Indian and South Pacific Oceans. Accidental in the Gulf of St. Lawrence.

FULMARS.

Birds of the open ocean, very seldom approaching land in this section. Excepting in the peculiar flight, characteristic of the group, noted on page 42, they closely resemble gulls, but the bill is shorter and thicker, fig. 30. Our species have a light and dark phase of plumage.

Fig. 31.



Fulmar. 1-10.

19. FULMAR.

About the size of a Ring-billed Gull, 18. The head, neck, and lower parts are white, with the back pale blue in the light phase, fig. 31, but in the dark phase the bird is sooty brown throughout. Occurs on the North

Atlantic, breeding on St. Kilda and other Scottish islands that lie far out to sea. South on the American side, in winter, as far as the Georges Banks, where it follows the fishing vessels to pick up the oily matter of fish cleanings cast overboard. Rarely appears in sight of the coast.

20. LESSER FULMAR.

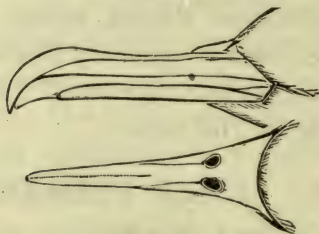
Very similar to the Fulmar, but smaller, 16, yet would be difficult to distinguish from it at any great distance. Range and habits about the same.

SHEARWATERS.

Birds of the open ocean, but which often approach within a few miles of the coast. They are of varying sizes but none are very small. Differ from the Fulmars in having a more slender bill, fig. 32. Graceful, easy-flying species which seldom rise high above the water and often fly in small flocks close to the surface, frequently in lines side by side.

During boisterous weather they (as well as most other members of the group) fly along

Fig. 32.



Audubon Shearwater.

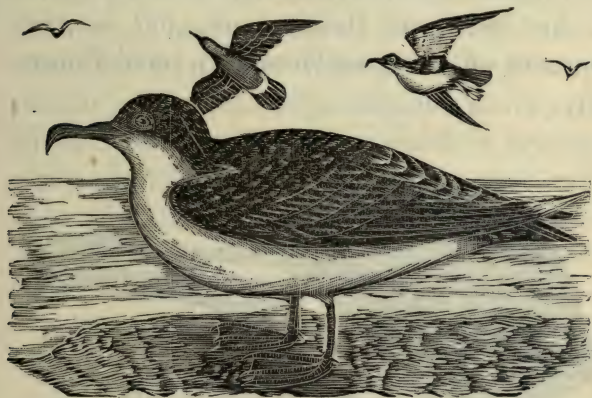
the hollows of the ever-moving billows, and as they roll under them, the birds cross their crests diagonally. Thus by shearing the water, they allow the spray, which is driven violently from the wave tops by the fierce ocean winds, to strike on one side of their tubular nostrils. They nest on islands, placing the egg in rock cavities, or beneath loose slabs of stone.

21. GREATER SHEARWATER.

Rather large, about the size of the Ring-billed Gull, but differs from any gull in hav-

ing the wings longer and more pointed, and in the smoother, more gliding flight. The color above is sooty brown, but this looks nearly black at a distance. The under parts are white, and this extends up on the sides

Fig. 33.



Greater Shearwater. 1-6.

of the head, with a sharp line of demarkation between it and the black. The under part of the wing is white, with axillaries broadly banded with black. This is easily seen when the bird flies near. The bill is black, but the

feet are yellowish. The primaries and tail are black and there is a line of white crossing the upper tail coverts, fig, 33.

It is very light and easy in flight, turning from side to side with so little effort that it appears to float gracefully in air. Breeds in the Southern Hemisphere, but is very common off our coast from May until December.

Fig. 34.



Cory Shearwater. 1-2.

22. CORY SHEARWATER.

Differs from Greater Shearwater in being lighter above, in fact, rather ashy brown, the bill is yellowish and the ashy marking above extend down on the sides of neck and throat without any sharp line of demarcation between it and the white below, fig. 34.

The Cory Shearwater is an irregular visitor to our coast, but is common some years. From whence it comes or whither it goes is a mystery, for its breeding place and entire range is unknown. Occurs off the coast of Massachusetts and on Long Island Sound in Sept. and Oct.

23. AUDUBON SHEARWATER.

Smaller than the Greater Shearwater, 12, but generally similar in coloration. There is an ashy patch in front of the folded wing, and a dusky space beneath the eye; otherwise the line of demarcation between the sooty brown above and white beneath is sharply defined, fig. 34*. Bill, rather slender and blue-black, fig. 32.

The downy young are dusky brown above and lighter beneath, fig. 29. The nests are placed in cavities of rocks, beneath loose slabs, in caves, and sometimes in the shelter of creeping vines. The eggs are deposited from March 15th to April 15th.

Flight, swift and direct in the daytime but more erratic by night, when the birds visit their breeding grounds.

Cries, when the birds are annoyed, harsh and discordant; the breeding notes, given only in the night, are mellow and musical. They are uttered in a minor tone when the bird is flying, like, "*que-ar-a-var*", accented on the second and final syllables, but mainly on the second, with the last prolonged.

Excepting when nesting, occurs far out on the open ocean, and even when breeding, is seldom seen within sight of land in the day time, visiting its nest in the night only. Audubon Shearwater is found in the warmer portions of the Atlantic Ocean. Breeds on the

Bahamas and Bermudas, where it is common. Casual as far north as Long Island; rare on the Bahamas in winter.

24. MANX SHEARWATER.

Similar to Audubon Shearwater, but larger, 14, and with the black of the head extending somewhat below the eye, fig. 35. Resident on the North Atlantic, but chiefly on the eastern side. Casual off our coast and on the Banks of Newfoundland.

25. SOOTY SHEARWATER.

Similar in form and habits to the Greater Shearwater but sooty brown throughout (appearing black at a distance), darkest on the wings and tail; palest beneath, fig. 35. Occurs on the Atlantic Ocean, breeding in the Southern Hemisphere, occurring off our coast rather commonly from South Carolina northward from July 1st until September.

Fig. 34*.



Audubon Shearwater.

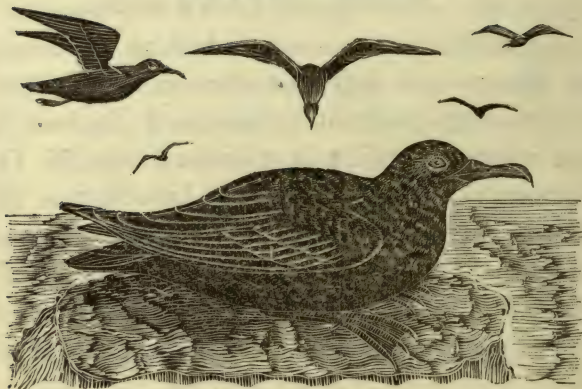


Fig. 35*. Sooty Shearwater.

26. BLACK-CAPPED PETREL.

About the size of the Sooty Shearwater, but the tail is wedge-shaped, not rounded as in that species. The top of the head and upper parts are black with the margins of the feathers paler. There is a large white

Fig. 35.



Manx Shearwater. 1-8.

patch on the rump and basal half of the tail. The sides of the head and neck and the lower parts are pure white. Occurs in the warmer parts of the Atlantic; stragglers have been taken in Florida, Virginia, New York, Vermont, and Ontario.

27. SCALED PETREL.

About the size and form of the black-capped Petrel. Dark bluish ash above with most of the feathers broadly margined with ashy white, giving the bird a scaly appearance.

White beneath, irregularly and rather finely banded with grayish. Known only from a single specimen which was obtained in a plowed field, Livingston Co., New York, in April, 1880.

28. BULWER PETREL.

A small bird, 10 long, with a doubly wedge-shaped tail. Sooty brown throughout, somewhat paler beneath and in a patch on wing. Occurs in Europe, Africa ; occasional in Greenland and accidental in Bermuda.

29. STORMY PETREL.

The smallest of our Petrels, about 5.50 long. The tail is square. Sooty black throughout, including bill and feet, with a

white patch of varying size on the under side of the wing. Occurs on the North Atlantic; south to the banks of Newfoundland and west coast of Africa. Rare in summer.

30. LEACH PETREL.

8 long. Sooty black, paler beneath and in a spot on the middle wing which shows distinctly at a distance. Spot on rump white. The bill is quite large, fig 36, and the wholly

Fig. 26.



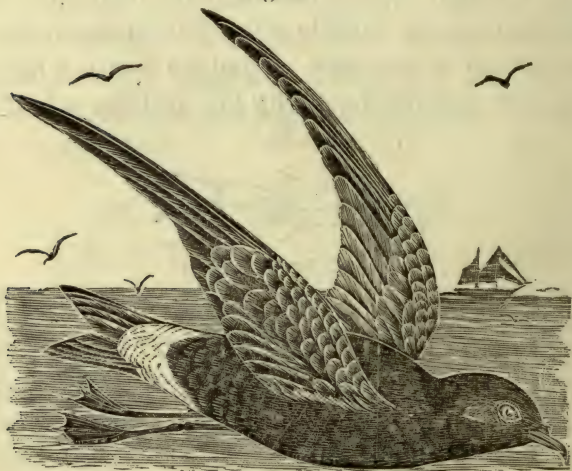
Bill of Leach Petrel.

black feet, when outstretched, do not reach to the tip of the tail, fig. 37. This and the next species fly lightly over the water near the surface with a dancing somewhat erratic, but very graceful movement, occasionally pattering on the water with their feet, especially when picking up food.

The Leach Petrel occurs on the north Atlantic and north Pacific Oceans, breeding

on our coast from Maine northward in June, nesting usually in burrows which it digs for itself in the peaty soil of islands, or occasionally on the face of earthy or sandy cliffs like Bank Swallows. Common from June until October. Winters south of our limits.

Fig. 37.



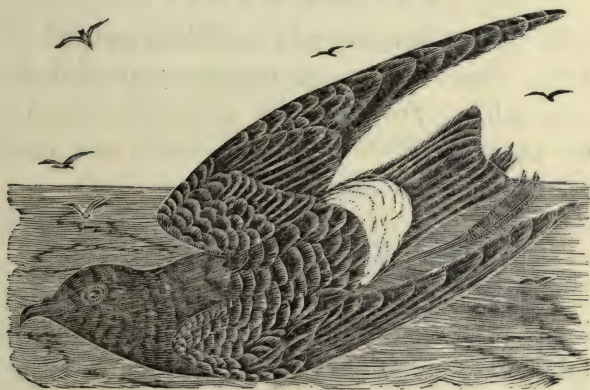
Leach Petrel. 1-3.

31. WILSON PETREL.

A little smaller than Leach Petrel, but looks much darker as it is without the light

patch in the wing. The outstretched feet reach at least as far as the tip of the tail. (fig. 38), and the webs of the toes are nearly yellow. The bill is smaller, fig. 39. Spot on rump white. Occurs on the north and

Fig. 38



Wilson Petrel. 1-3.

south Atlantic and Southern Oceans. Breeds on Kergulen Island in Feb. Abundant off the eastern coast of the United States from June until Sept.

32 WHITE BELLIED PETREL.

8.50. Tail emarginate. Black or dusky above and on throat. Belly and under tail coverts white. Intertropical seas, north occasionally to the coast of Florida.

33. WHITE-FACED PETREL.

About the size of the White-bellied Petrel. Dark above with the upper tail coverts ashy. Forehead, line over eye, and lower parts white. Southern Seas, accidental off the coast of Massachusetts.

TOTIPALMATE SWIMMERS.

This is a group of easily recognized birds. They are of somewhat varying size but none are very small, while others are quite large.

The external characters possessed in common, and which bind the group together, are, hind toe connected to the anterior toes by a web, fig. 39, and a more or less well

developed extensible pouch beneath the bill (gular sac), fig. 40, with other minor characters. The young are hatched naked, fig. 41; but are soon covered with down. They are helpless, being at first fed by regurgitation and do not fly until nearly or quite fully grown; they subsist wholly upon fish.

The order may be divided into well established natural groups as follows:-

TROPIC BIRDS.

These are perhaps the smallest of the Totiplamate Swimmers. In them the gular sac is reduced to the minimum size; the beak is comparatively small, not hooked at the end but pointed like those of the terns, fig. 40. In fact, the birds have a very tern-like appearance, but differ from them in having the central tail feathers greatly elongated and projecting from beyond the others, fig. 42. The feet are small, fig. 43.

The single egg is placed in a cavity of rocky cliffs on ocean islands. It is purplish

Fig. 39.



Wilson Petrel.

brown spotted with darker brown. The downy young are at first wholly white then dark feathers appear on the back.

Fig. 40.



Bill of White Pelican. 1-7.

The flight is steady and direct with rapid wing-beats, but the birds can turn in air and circle with ease. They procure their prey by diving like terns. Their cries are loud and harsh. Gregarious when breeding, but solitary at other times. Tropical and sub-tropical in distribution. The sexes are similar.

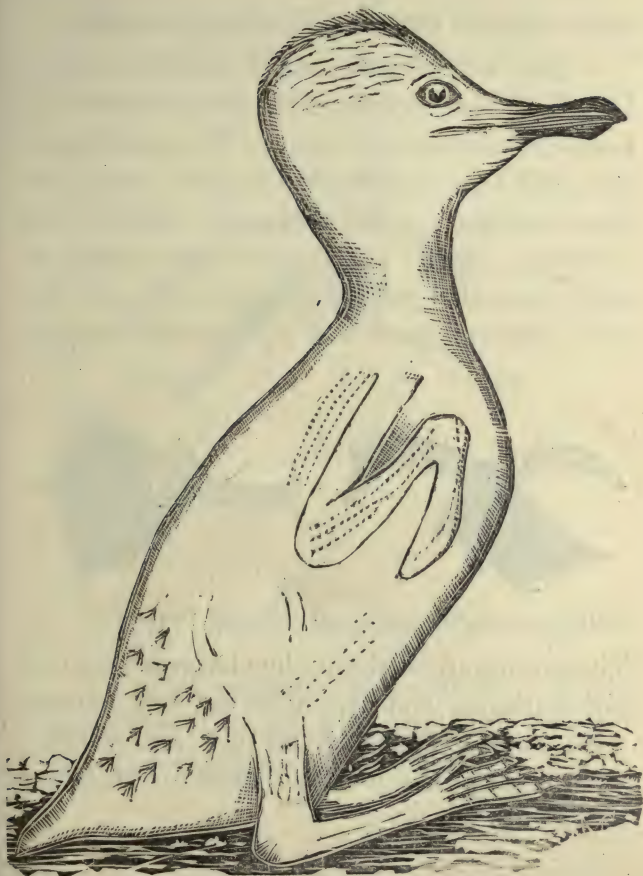


Fig. 41. Young Gannet. unfledged.

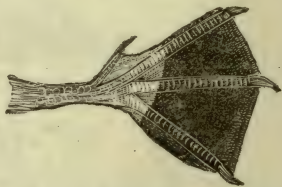
34. YELLOW-BILLED TROPIC BIRD.

Body about the size of that of the Laughing Gull, but, including the long central tail feathers, the bird is 29 long. White throughout, well tinged with salmon-pink which becomes deeper on the elongated central tail feathers. There is a small curved patch of black on either side of the head, two on the back, and one near the tip of either wing.

Fig. 39.



Fig. 43.



Totipalmate foot of Cormorant. Foot of Tropic Bird. 1-2.

The young are without the elongated central tail feathers, and are more or less banded with black. The bill and feet are yellow, with most of the toes and webs of the latter black. fig. 43.

Breeds in the Bermudas, Bahamas, and West Indies in May. Occurs occasionally in Florida, and was once taken in western New York.

Fig. 40.



Head of Tropic Bird. 1-2.

Unless feeding, or about its breeding ground, the Tropic Bird flies high over the water, moving with a direct flight.



Fig. 41*. Young Cory Gannet, partly fledged.

35. RED-BILLED TROPIC BIRD.

Differ from the Yellow-billed in being larger, 34, in having the bill coral red and the elongated tail feathers white. Occurs along the coasts of Tropical America. Breeding on the islands in the Gulf of California. Accidental on the Newfoundland Banks.

GANNETS

These are Ocean Birds of from moderate to large size. They are usually white with, black or brown primaries, or are sometimes wholly brown. There is a naked space in front of the eye, around it, and at the base of the bill, but the gular sac is not very well developed. The bill is pointed and the tail is long.

The nests are placed on the ground, on rocks or on trees. They are bulky structures, composed of sticks sea-weed, and other coarse material. The eggs are one or two, white, and covered with a chalky incrustation.

The flight is steady and direct with necks outstretched and rapid wing beats, but the birds can turn in air with ease. They procure their prey by diving directly downward, often from a considerable height, becoming completely submerged in the water.

The feet are usually wholly concealed in flight. The birds walk well and perch on trees with ease. Sexes, similar. The young in the down are white.

36. GANNET.

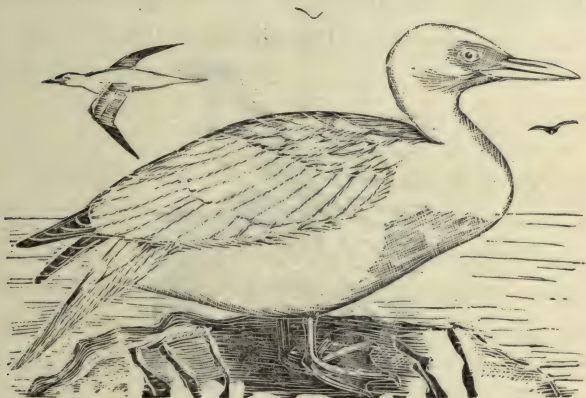
A large bird of a peculiar silvery white but becoming buff about the head and neck. The primaries look black and the bill whitish. Fig. 44. The young are dark-brown streaked and spotted with white, fig. 45. Length, 39.

The Gannet breeds in the Gulf of St. Lawrence in May, migrating south from Sep. to Nov. Some few winter off the coast of New England but more abundantly south of

this, going as far as Florida. It returns north in March and April.

It feeds quite near land and may be seen off nearly all of the exposed ocean beaches diving and flying about. It differs from all gulls in the downward plunge, often from a

Fig. 44.



Gannet. 1-9.

considerable height, and in the silvery gleam of its plumage. Gulls sometimes dive, but never with such force as does the Gannet, which in its downward rush sends the water

high in the air as it plunges into it. In migrating the Gannet moves in irregular, straggling lines without system.

BLUE-FACED GANNET.

Differs from the Gannet in being much smaller, 28, and in having the most of the wings and tail (except the central feathers

Fig. 42.



Tropic Bird. 1-6.

and base which are white) dark-brown. The naked portions of the face are blue. Young, with the head, neck, and upper parts dark-

brown; lower parts, white. Breeds from the Bahamas southward in May; wandering to Florida.

38. RED-FACED GANNET.

Similar to the last, but with tail wholly white; naked space on face, red or yellowish. Young, brown throughout; lighter beneath. Breeds on islands in intertropical seas, wandering to Florida.

39. BOOBY.

Large, 30.50; brown throughout, excepting on posterior portion beneath which is white. Young, brown throughout. Tropical and intertropical coasts of America; common off east coast of Florida; rare north to Georgia; accidental in Mass.

PELICANS.

Large water birds, white or brown, with long, flattened, prominently hooked bills, and large unfeathered gular sacs; tail, short. The nests, placed in trees or on the ground. Eggs

one or two, similar to those of Gannets. The downy young are grayish.

Fig. 45.



Brown Pelican. 1-20.

Pelicans are rather awkward birds moving on the ground with a wadding gate; when the the birds are at rest, the bill is held against the breast, fig. 45. Flight, slow and direct, with alternate flapping and sailing, the birds often forming lines side by side or fly in V-shaped flocks; wing beats, slow; neck, doubled back in flight; highly gregarious at all times. Incapable of pro-

ducing any sound, save a low grunt. Sexes, similar.

40. WHITE PELICAN.

Very large, 68. White, large portion of wings black; bill and naked space about face, yellow. There is a central elevation on bill in summer, fig. 40, which is absent in winter. Iris. white in summer, brown in winter. Feet, yellow.

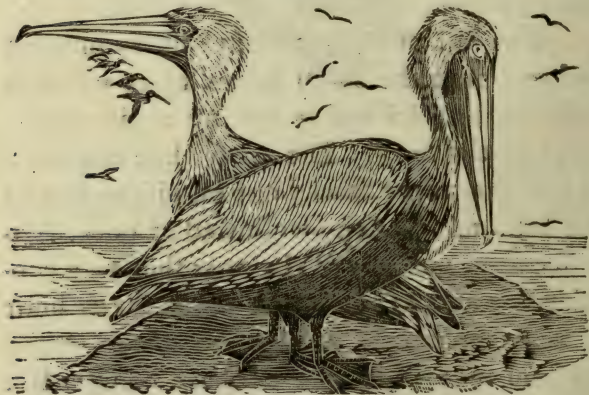
The White Pelican fishes by swimming and scooping the small fishes, upon which it subsists, into its gular sac by a side movement of the head. The sac is then contracted and the water forced out on either side of the bill and the fish swallowed at once. After feeding, many will rise together to a considerable height and circle about for an hour or more on nearly motionless wings, crossing and recrossing one another constantly. Rests on isolated sand bars by night and often resorts to them by day. Breeds in the interior of North America from Utah north-

ward in May; common in Florida and along the Gulf coast in winter; rare on the Atlantic coast of Florida, occasionally straying as far north as Mass. Goes north in April, south in Sept.

46. BROWN PELICAN.

Smaller, 50, grayish above and black below where there are some streaks of whit-

Fig 46



Brown Pelican. 31-15.

ish; head and stripe on side of neck, white; back of neck, chestnut-brown; bill, whitish;

naked space about face and gular sac, greenish; feet, bluish; iris, white. In winter the back of the neck is white, fig. 46, right, summer, left, winter. Young, grayish above and white beneath.

Brown Pelicans move in a straight line side by side often flying parallel with the coast and very near it. In fishing, they usually fly at a slight elevation over the water, then by dropping into it with partly spread wings, secure their prey. Breeds in abundance on islands in southern Florida, Caribbean Sea, and West Indies, wandering regularly to N. C. and accidentally to Ill.

CORMORANTS.

More slender water birds of from moderate to large size; black or brownish; bill, shorter than head, it is not flattened, but is prominently hooked; gular sac, small, fig 47; wings, rather long; tail long and rounded. Nests, placed on rocky cliffs, trees and bushes, composed of sticks, seaweeds, etc; eggs, 2-5; greenish, covered with a chalky

incrustation. Flight, rapid, direct, often in lines or Vs, but frequently breaking into irregular masses; wing-beats, continuous and

Fig 47.



Double-crested Cormorant. 1-10.

rather rapid; neck, outstretched, fig. 47; often perch on buoys, beacons, rocks, and trees;

when sitting the head is held well up slightly in advance of the body, the neck in the form of an S, sometimes the wings are windily spread for a considerable time, fig. 48.

Cormorants walk quite well and dive with ease, sometimes from the wing, but more often when swimming, and can remain under water several minutes. In alighting, they will usually pass the object on which they intend to rest, then turn and go back to it. In starting from a perch, will drop nearly to the water, then rise. If suddenly alarmed by a shout or a gun shot when flying low over the water, will often drop into it, diving as soon as they reach it. The cry, seldom given, is a harsh croak.

The young are hatched naked with the skin bluish or black and shining as if polished. Sexes similar. There are usually white, filamentous feathers about the head during the breeding season, but these cannot be seen at any great distance.

47. CORMORANT.

Large, 38, blue black throughout, grayish above; prominent white patch on flanks and upper throat; gular sac, orange; feet black. Young, brown above, very light be-

Fig. 48.



Double-crested Cormorant. 1-16.

neath, but there are no white patches as in the adult.

Atlantic coast of N. A., breeding from the Gulf of St Lawrence northward in May; goes south in Nov, north in April winters from Greenland to N. J.; common north of the U. S., uncommon in N. E. and south of it.

48. DOUBLE-CRESTED CORMORANT.

Differs from last in being smaller, 32, in having no white patches any where, and with white filamentous feathers over the eye in spring. Young, not as white beneath. Gula sac, orange; bill and feet, black. figs. 47-48. Our common species in New England; frequent in migration in Sept., Oct., and April, off the coast or crossing headlands. Occasionally seen on fresh waters. Winters from N. E. south through the Gulf States. Breeds from the Bay of Fundy, the Great Lakes, Minn.; and Da. northward in May.

49. FLORIDA CORMORANT.

Smaller, 30, seldom has white feathers over eye. Resident in South Atlantic and Gulf States, breeding chiefly in April; wandering occasionally as far north as Ill. Very common; also occurs on the Bahamas.

50. MEXICAN CORMORANT.

Small, 26, browner than the others, more slaty on back, white line adjoining gu-

la sac, this and naked space about face, brownish. Young grayish brown, lighter beneath, sometimes white on throat and under tail coverts. Breeds in Texas, Mexico, and Bahamas, wandering along the Gulf of Mexico and up the Mississippi Valley to northern Ill. Common.

ANHINGAS.

Large, slender birds which occur on inland waters ; long necks, small heads, pointed bills, long, fan-shaped tails, with central feathers corrugated, fig. 49. Flight, steady and direct, wing-beats, rapid, often soar at a considerable height in circles.

51. ANHINGA.

Large, 35 ; male, greenish black, spotted and streaked above with gray ; tail, tipped with ashy. In spring there are long, ashy, filamentous feathers on head and neck, fig. 49. Young, more or less whitish on lower neck. Female differs in having lower part of neck and upper breast ashy yellow. Young brownish throughout. Resident in tropical

and sub-tropical America, north in summer to the Carolinas, the mouth of the Ohio and

Fig. 49.



Male Anhinga. 1-8. Female, in flight.

southern Kansas. Breeds in Fla. in March. Nests of sticks placed in trees; eggs, five or six, much like those of Cormorants.

Common on inland waters where it sits upright on trees which project over the water. When suddenly alarmed, drops into the water and instantly disappears. Has the power of sinking slowly and swims beneath the surface with ease and swiftness, thus capturing the fishes upon which it feeds. Sometimes plunges obliquely into the water when on the wing and can emerge in flight. Often swims with the head and neck projecting above the surface, or even with the bill only in sight. Cry, seldom given, guttural and harsh.

FRIGATE BIRDS.

Coast-wise birds of large size and powerful flight; bill, longer than head and strongly hooked; head, large and somewhat crested; gula sac, rather large; neck, short; wings and tail long, the latter deeply forked; feet, small and weak, but although the birds perch well on trees, they are incapable of walking and swimming well. Nests and eggs, much as in the Cormorants. Young, naked at first,

lead-colored, but is soon covered with long, white down.

Flight, when the birds are moving from place to place, steady, strong, with slow wing beats, but when in pursuit of other birds, very rapid and exceedingly graceful. Cries, harsh, loud, and resilient. Food is chiefly procured by robbing other birds of fishes. Highly gregarious, even breeding in communities. Sexes, not similar. Tropical and sub-tropical.

52. MAN O' WAR BIRD.

Very large, 40; male, black throughout, back, lustrous with green and purple, fig. 50. Female with breast and sides whitish. Young, white beneath. Tropical and sub-tropical coast regions chiefly north of the equator. Breeds as far north as the Bahamas, Fla., and Texas. Accidental in Pa., O., Kan., Tex., and Nova Scotia.

Several together may frequently be seen floating high in air over harbors or islands.

LONG-WINGED SWIMMERS.

Water birds of variable sizes; wings, long; toes, webbed, wholly or in part, fig. 61; colors, somewhat variable, but often bluish or slaty above and white beneath. Food, chief-

Fig. 50.



Man O' War Bird. 1-10.

Fig. 52.



Parasitic Jaeger. 1-5.

ly fishes, but some species are scavengers and some subsist partly on insects. Occur in all regions of the globe on bodies of salt and fresh water. Sexes, similar.

SKUAS AND JAEGERES.

Gull-like birds, most species of which procure much of their food by robbing Gulls and Terns. Color, dark above and often be-

Fig. 53.



Parasitic Jaeger, adult in spring. 1-10"

low; tail moderate, slightly rounded with the two central feathers longer and projecting beyond the others, figs 52-58. The flight is swift and the wing beats rapid. Ocean birds, breeding on the coasts of the colder waters of the world. Nests placed on ground; eggs, 2-3, brown spotted with darker.

[Note: The Southern Skua, *Megalestris antarcticus*, which closely resembles our Northern Skua, and which breeds on Kurguelen Island, is said not to rob Gulls and Terns. It has hawk-like habits and preys upon other birds, especially the young of species that nest on the island.

These hawk-like habits are shared to some extent not only by our Skua, but also by all of our Jaegers, more frequently, however, when on their breeding grounds. All members of the group are sometimes scavengers.]

53. SKUA.

A little smaller than a Herring Gull, 24. Central tail feathers, project slightly and are very bluntly pointed terminally, fig.

54; brown streaked with pale reddish; distinct white spot at base of primaries.

Young, more distinctly streaked. Breeds on the coasts and islands of the North Atlantic; not common on our side; casual as far south as S. C.

Fig. 54.



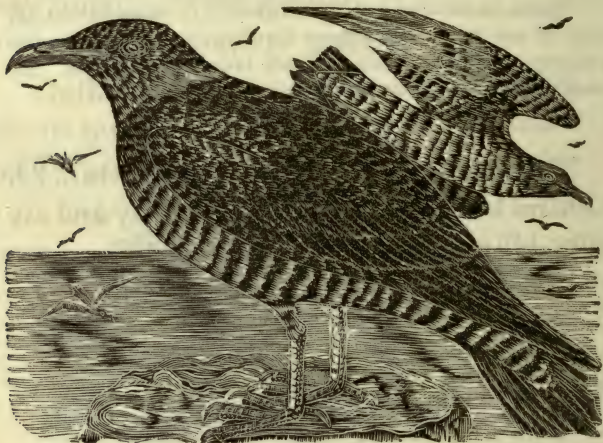
Skua. 1-2.

54. POMARINE JAEGER.

Smaller, size of Laughing Gull, 22. Projecting tail feathers longer, but not sharply

pointed, flgs. 55-56. Two phases of plumage: Light phase; top of head and above dusky, sides of head and below white. Dark phase,

Fig. 55.



Pomarine Jaeger in autumn. 1-5.

uniform dusky and all intergrades occur between the two phases. Young, banded below with buff. Breeds far north. Migrates south from Aug to Oct; winters far south; north in May.

55. PARASITIC JAEGER.

Similar, smaller, 20, projecting tail feath-

ers pointed, figs. 52, 53, 57. Breeds far north. South from July to Sept; winters from N. J. southward; north in May and early June.

56. LONG-TAILED JAEGER.

Size of last; central tail feathers greatly elongated, 8 to 10 inches, fig.

Fig. 56.

58. General colors paler, especially above. Breeds in the far north; exact winter range unknown. South in Aug.; north in May. Very rare on our coast.

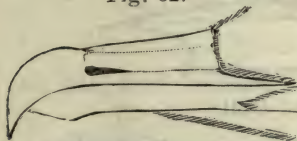


Pomarine Jaeger. 1-2

GULLS.

Of varying size. Adults nearly or wholly white beneath, sometimes rose tinted; blu-

Fig. 52.



Parasitic Jaeger.

ish or slaty on back and wings—this area is called the mantle. The bill is somewhat hooked, fig. 59; tail,

short, square, rarely forked or wedge-shaped, fig. 60; feet, large and fitted for walking; toes, fully webbed, fig. 61. Nests, placed on

the ground, sometimes in trees, composed of weeds and sticks; eggs, 2-4, brown mottled

Fig. 57.



Fig. 58.



Jaegers 1-2; Parasitic, Long-tailed.

with darker. Food, which consists of fishes, other sea animals, and floating garbage, is secured by the birds swooping downward at an angle, and, although when catching living fish, gulls occasionally become submerged, I have never seen one dive perpendicularly. Some eat dead fishes which are cast on shore, and a few feed upon insects. Cries,

Fig. 59.



Ring-billed Gull.

often harsh but sometimes modulated and not unmusical. Immature plumage quite unlike the adult.

57. IVORY GULL.

Medium, 19, Pure white; fig. 62. Young, more or less spotted with dusky. Breeds very

Fig. 60.



American Herring Gull. 1-8. Young in flight.

far north. South regularly to Labrador and Newfoundland; casually to N. B. and Mass.

58. KITTIWAKE GULL.

Medium, 17; mantle pale; white below, on tail and head; bill yellow, feet black; five

Fig. 61.



outer quills have the terminal portions black, forming a patch the inner outline of which goes

straight across the wing, fig. 63 and plate 2.

In the young this black is more extended, and a line along bend of wing, a patch on hind neck, and tip of tail is black, plate 2.

Fig. 62.



Ivory Gull. 1-10.

The Kittiwake is an ocean loving Gull occurring far from land in moderate weather,

Fig. 63.



Kittiwake Gull, adult. 1-10.

but during hard storms often approaches the land and is then sometimes found associating

with other gulls in bays and sounds. Flight, exceedingly graceful, easy, and tern-like and this distinguishes it from the Herring Gull when seen at a distance. Common cry in the breeding season; *Kitti-wake wake wake wak-er.*

Breeds from the Gulf of St. Lawrence northward in June, migrating southward in Oct.; winters from off the coast of New England south to the Middle States, casually almost to the Bahamas.

Nests, usually placed on rock shelves of perpendicular cliffs overhanging the ocean. They are small for the size of the birds, and are made of sea-weed.

Coast Gulls.

Gulls of this group are of somewhat variable size. Adults are white beneath and if not white above, then the mantle is bluish of some shade. If the wing is not entirely white, the dark tips of the primaries have white spots in them called mirrors; tail, short and square. Young are at first brownish and

assume the adult dress slowly. Very social, associating in large flocks, especially at night, in winter when many hundreds gather to sleep on the water.

59. GREAT BLACK-BACKED GULL.

Our largest common Gull, 30; mantle, dark slate, but it appears perfectly black in

Fig. 64.



Great Black-backed Gull.

the distance; white elsewhere and there is a white wing band; bill yellow and feet pinkish, fig. 64. Young for the first year, rather

pale brownish, darkest above. Adults are easily distinguished; the young are paler than those of the Herring Gull, larger, have slower wing beats, and a more majestic flight. Breeds from the Bay of Funday northward; south in Sept.; winters from southern Greenland to Long Island; north in April, a few often remain as far south as Cape Ann, Mass., all summer.

60. SIBERIAN GULL.

Smaller than the Black-back, 20; mantle a little paler; feet yellow. Northern Asia; accidental in southern Greenland.

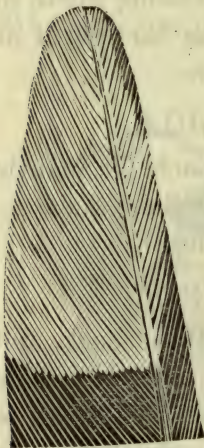
61. GLAUCOUS GULL.

About the size of the Black-back, and the flight is similar, but the mantle is pale pearl-gray and the wings nearly or quite white. Young, pale grayish, mottled above with light brown. Bill yellow, feet pink. Breeds in the Arctic Regions; south in winter regularly to the Gulf of St. Lawrence; rarely to Great Lakes and along coast to L. I.

62. HERRING GULL.

Smaller than the Black-back, 24, mantle, pearl gray; white mirror at tip of outer primary is not interrupted by a black cross bar, fig. 65; bill, yellow; feet, pinkish. Young

Fig. 65.



European,

Fig. 66.



American,

Herring Gulls.

the first year, nearly uniform dark brown; tail, almost black on terminal third. Second year, pale buff above, much banded and mot-

tled with darker, a broad, very dark subterminal tail band; beneath, quite uniform yellowish brown; no white on primary tips. Third year, although showing some of the colors of the adult, is more or less mottled throughout with dusky. Bill, brown in all immature birds. The Old World form, but also occurs not infrequently on our side of the ocean.

63. AMERICAN HERRING GULL.

Differs from the last in having the white on tip of first primary divided by a black bar, fig. 66. Breeds on both salt and fresh water from southern Me. northward; constantly resident on the coast south to Cape Ann, Mass.; winters in great abundance from Me. to the Carolinas and is rather common to the St. Johns River, Fla.; occasionally occurs on the coast of Cuba.

[Note:- Although I am, of course, aware that many ornithologists no longer separate the Herring Gulls on either side of the Atlantic, I still continue to do so for reasons which cannot well be here stated.]

64. KUMLIEN GULL.

A little smaller than the Herring Gull; much paler; back, slightly bluish; primaries, grayish, but with the mirrors distinct; the wings, however, usually appear quite white in flight; bill, yellow, feet, pinkish. Young, creamy, mottled with pale brown. Breeds about Cumberland Gulf; south in winter regularly to the Gulf of St. Lawrence and Mass. but is rather uncommon with us.

65. ICELAND GULL.

Similar to the above, but pure white; young, pale brown mottled with a little darker shade. Breeds on the northern coasts of the north Atlantic; south in winter rather rarely as far as Mass.

Both the Kumlien and Iceland Gulls fly with a little quicker movement of the wings than the Herring Gull with which they often associate. The Iceland Gull always appears paler than the Kumlien even when seen at a distance.

66. RING-BILLED GULL.

Smaller than the Herring Gull; similar in color, but with the mantle a little darker

Fig. 63*.



Kittiwake Gull. Young. 1-5.

bill, green crossed by a black band, fig 59. Young much lighter than in the Herring Gull, even in the first year the head, neck, and lower parts appearing nearly white; the mantle is pearly as in the adult, but mottled

in irregular patches with brownish; there is a conspicuous, sharply defined band of black on end of tail; bill, black yellowish at tip, fig. 67. In this first plumage much like the Herring Gull of the third year, but aside from the much smaller size of the Ring-bill, its black tail band is narrower and more sharply defined. As in Black-backs, there is no intermediate dress between first year and adult.

Fig. 67.



Young Ring-billed Gull. 1-5.

Breeds in northern N. A.; south in autumn over the whole country in Aug. and Sept.; winters from the Carolinas to Cuba and Mexico. Not uncommon in Mass. in migration, but more common elsewhere in its range.

67. MEW GULL.

Similar in size and general coloration to the Ring-bill, but the bill is a little stouter. Europe and Asia, accidental in Labrador, one record.

Hooded Gulls.

Size medium or small; heads in summer adults black, grayish in winter; white beneath tinged with rosy in summer; white markings on primaries variable or absent. but never like those of the Coast Gulls.

68. LAUGHING GULL:

Size, medium, 16; mantle, dark bluish gray darker than in any species given excepting in the Black-back; primaries, black,

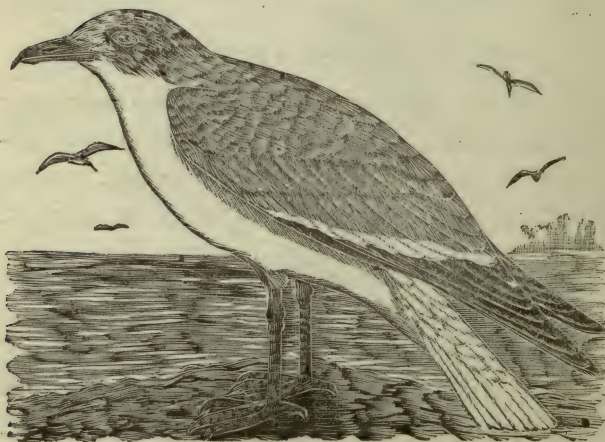
slightly tipped with white; prominent white wing bands; bill, crimson-lake; iris and feet, brown; fig. 68. In winter, head white tinged

Fig. 68.



Adult Laughing Gull in summer. 1-8.

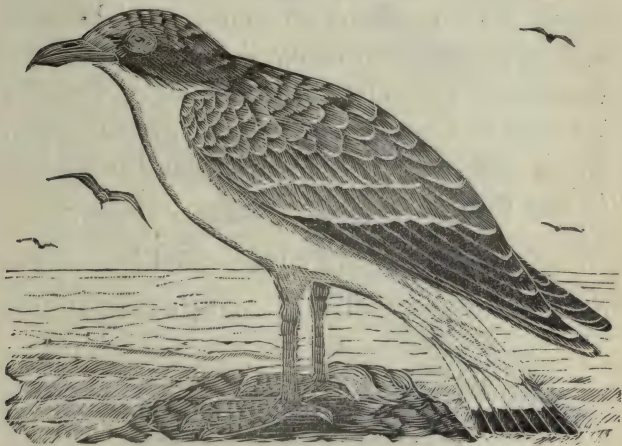
Fig. 69.



Adult Laughing Gull in winter. 1-4.

with color like that of back, fig. 69. Young, brownish throughout in fall, tip of tail black; first winter, whitish beneath, bluish gray on back, fig. 70. Breeding cries like peels of de-

Fig. 70.



Young Laughing Gull in winter. 14-

risive laughter; adult also gives a short call note that is answered by the fully grown young with a snarling cry. Breeds from the southern coast of Me. southward through the Bahamas; south in Sept., remaining on coast of Carolinas until Dec.; winters from Mexico

to S. A.; comes north in April. Not common north of Cape Cod.

69. FRANKLIN GULL.

A little smaller than last, 14; differs in being darker above; primaries, bluish-gray and in all stages broadly tipped with white. Breeds from O. north through Minn. and the interior of Canada. Often occurs far from water subsisting upon insects, and is known as the Prairie Dove.

70. BONAPARTE GULL.

Smallest of our Gulls, 13; mantle pale bluish,

Fig. 71.



Bonaparte Gull; upper fig. summer adult; lower, young. tail and lower parts, white; primaries, white

narrowly margined with black outwardly and more broadly at tip; tail and beneath,

Fig. 72.



Bonaparte Gull, first year. 1-5.

white; bill, black, feet, yellow, fig 71 upper; in winter white with dusky spot back of eye; young differs in having wing black margined all around excepting near bend, fig 72, thus differing from the young Kittiwake which has wing black margined all around fig. 63*,

in front, but is white behind.

Breeds in the Arctic and migrates over the whole U. S.; south from Aug. to middle Nov.; winters from Carolinas to Gulf of Mexico; north March to May. Flight, swift, easy, graceful, and tern-like. When migrating often flies along shore, usually in small companies. In winter occurs more scatteringly flying over sounds or creeks or often far up rivers. Cry, seldom heard in migration, is harsh and rasping. Common.

71. LITTLE GULL.

Smaller than the last, 11; little or no black on wings; in the young the tail is without the black tip. Old World; accidental in in Bermuda and Long Island.

72. ROSS GULL.

Tail graduated, fig. 73; small, 14; white tinged with pink; pearl-gray above and on wings below; outer web of first primary and collar around neck, black. In winter black collar absent, head tinged with grayish, black spot in front of eye. Young clouded with

Fig. 73.



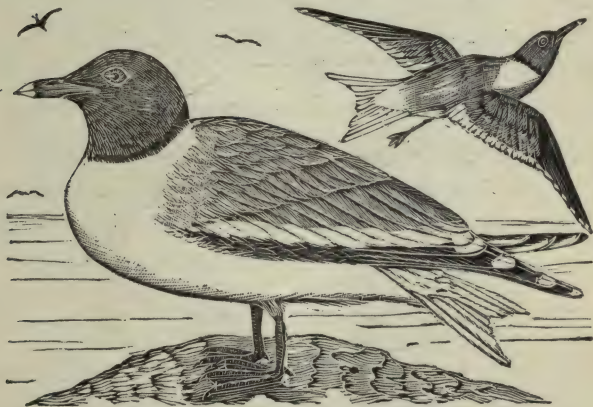
Ross Gull.

dusky above, some of inner tail feathers tipped with black. Breeds in the Arctic, south in winter as far as Disco Bay in Greenland.

73. SABINE GULL.

Small, 13.50; tail prominently forked, white, head and upper neck dark plumbeous,

Fig. 74.



Sabine Gull; summer adult. 1-4.

below this a black collar; mantle, dark blue-

gray; primaries, black five inner tipped with white; bill, black yellow tipped; feet, black, figs. 74, 75. In winter, head white, spot on side and patch on occiput plumbeous. Young,

Fig. 75.



Sabine Gull; summer adult.

brown-gray above; tail, white with a subterminal band of black. Arctic; south in winter very rarely as far as Mass., N. Y. and Great Lakes.

T E R N S .

Variable in size but generally more slender and graceful than gulls; bills, pointed never hooked; wings, long and pointed; feet,

small and rather unfitted for walking in adults, yet the birds swim well in quiet water. Ocean coasts and estuaries and fresh waters. Nests placed on sand, rocks, or bushes; eggs 1-5, similar to those of gulls. Procure their prey, which usually consists of small fishes, by diving perpendicularly downward, often becoming wholly submerged in water. The flight is swift with graceful, swallow-like movements; when the birds are searching the water beneath their bills are pointed downward. After alighting, and at other times when on land, the wings are often stretched upward. When a number are flying together, frequently in response to a signal cry of a leader, all will dart obliquely downward and fly rapidly along the water. Downy young, buffy spotted above with dusky, plate, I.

74. GULL-BILLED TERN.

Large, 14; bill, thick and gull-like, fig. 76; tail, slightly forked; white, head and nape, black. In winter, head white mottled

with dusky on nape and ear-coverts. Young,

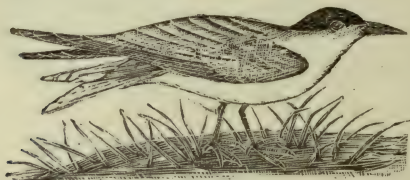
Fig. 76.



Gull-billed Tern.

similar, but buffy above. Bill and feet, always black, fig. 77. Nearly cosmopolitan; in

Fig. 77.



Gull-billed Tern. 1-7.

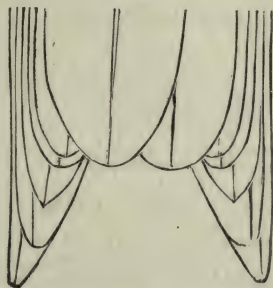
N. A. breeds from southern N. J. southward to the Gulf Coast, rarely wandering in late summer and early fall to Mass. Flight, heavy and slow; Cries, harsh and rasping.

75. CASPIAN TERN.

Largest of our Terns, 21; form, robust; bill, long, thick, heavy, dull red; tail, slight-

ly forked, feathers not narrowed terminally, fig. 78. White, black-capped, mantle pale. In

Fig. 78.



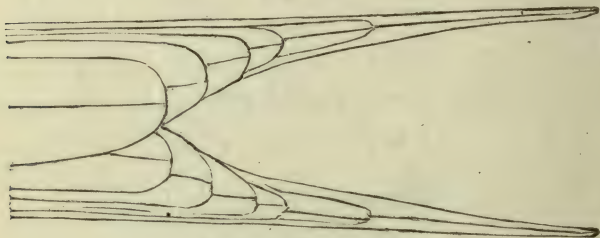
Caspian Tern. 1-2.

winter back of head, streaked with white. Feet, black. Young, grayish flecked above with dusky; each tail feather has a subterminal dusky spot. Flight, although heavy, is swift and tern-like. Cries very harsh and rasping suggesting a rapid honking of the Canada Goose. Nearly cosmopolitan, breeding south in N. A. to Va., Tex., Nev. and Mich. Not very common on the coast of N. E.

76. ROYAL TERN.

Similar to last; tail more deeply forked, its outer feathers narrowed, fig. 79; flight, rather heavy and jerky. Cry, a harsh, rasp-

Fig. 79.



Caspian Tern. 1-2.

ing croak. Breeds from coast of Va. southward in June; rare as far north as Mass. and the Great Lakes; winters from the Carolinas southward; Abundant.

77. CABOT TERN.

Similar in color to last, but smaller, 14, and more slender; bill, black yellow at tip; feet, black, fig. 80. Cry, single, harsh, often repeated. Breeds on Gulf Coast and Bahamas, accidental at Chatham, Mass., one record; winters from the Fla. Keys southward.

Pale-backed Terns.

Smaller Terns; tails deeply forked; outer feathers narrowed terminally, fig. 81. All of our species, excepting 79, have black caps and pale blue-gray mantles. Flight, graceful and rapid.

78. TRADEAU TERN.

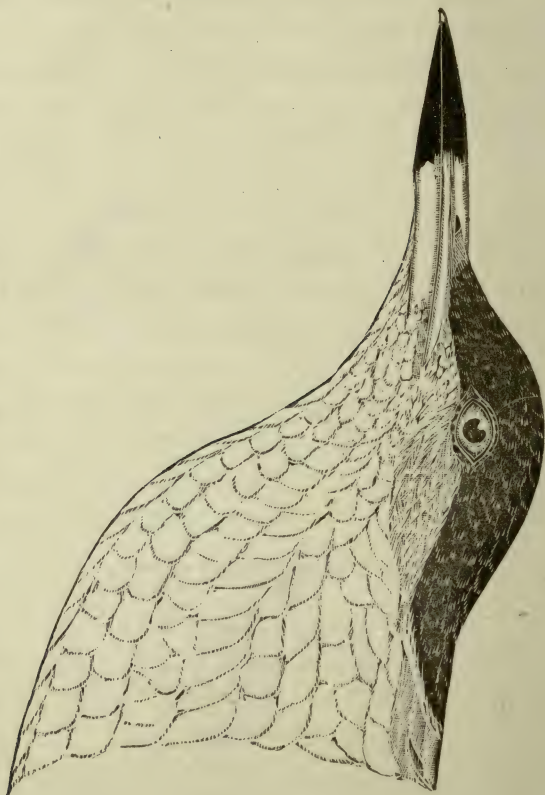
Size of Common Tern, but differs from this and all others of the group in having head white with dusky spot on either side extending from bill to ear coverts enclosing eye; remaining plumage, pearl-gray; bill; black, yellow at base and tip; in winter entire under parts white. Southern S. A., accidental in N. J. and Long Island (Audubon).

79. COMMON TERN.

Size, 14; mantle, rather dark; tips of outer tail feathers not extending beyond points of folded wings and their outer webs are dusky, fig. 81; chiefly white below; bill, red black at tip, fig. 80; in winter, cap white black on occiput only. Young with forearm

Fig. 80.

HEAD OF COMMON TERN.



dusky; cap, white anteriorly, dusky behind wholly across occiput, extending forward

Fig. 80



Cabot Tern. 1-7.

narrowly around eye; mantle, a little darker than in adult sometimes banded with dusky; bill, nearly black; wings, much as in adult; tail, shorter, ashy with outer webs dusky;

Fig. 81



Common Tern. 1-10.

feet, red. Cry, "*te-arr*," last syllable prolonged; alarm, "*ki*," repeated rapidly many times. Greater portion of Northern Hemis-

phere; in N. A. breeds on coast and it suitable places in interior east of plains from Fla., Tex. and Ariz., north to the Arctic in May; south in Sept., but a few linger on

Fig. 82



Young Common Tern.

coast until middle Oct.; winters south of the U. S. Abundant.

80. FOSTER TERN.

Differs from last in having bill black, outer webs of tail feathers white, fig. 82; in winter entire top of head and occiput white, but there is a wide black space about eye, fig. 88. Young similar to winter. Bill and feet, always black. Breeds chiefly, in the in-

terior from Va., Ill., Tex. and Cal., north to Manitoba, in May. South in Sept.; winters from N. C. to Brazil; north in April; rare

Fig. 83



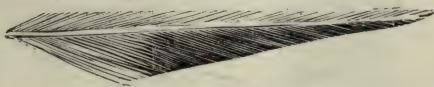
Forster Tern. 1-2.

on the coast of Mass. Cries, similar to those of Common Tern but harsher.

81. ARCTIC TERN.

Differs from Common Tern in having bill wholly red, fig. 85, under parts pearl-

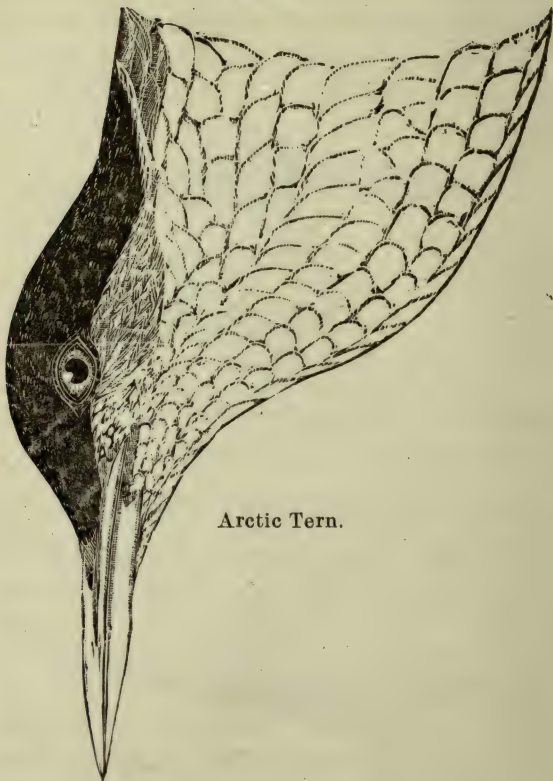
Fig. 84



Forster Tern.

gray, and feet coral-red. Young have bill black, feet yellow but the rump in all ages

Fig. 85



Arctic Tern.

is always abruptly white; cries quite similar to those of common Tern but more interrupted. Northern Hemisphere, now breeding from Me. (formerly from southern Mass.) north to Arctic. Time of migration similar to that of Common Tern with which is then associates at least as far south as coast of Mass.; winters in the Antarctic.

82. ROSEATE TERN.

More slender; tail longer than any of the preceeding, and this has the outer feather very narrow terminally and is wholly white; bill, black; feet, yellow; in summer tinged with rosy beneath, fig. 86. Young have back banded and mottled with dusky and bill and feet black, fig. 87. Cry *O-ar-ar-ar*, harsh and rooling, difficult to imitate. Temperate and Tropical regions; breeds, from south shore of Mass. southward in May; winters south of U. S., south in Aug.; north in May; often wanders in fall north of Cape Ann. Common.



Fig. 86—Roseate Tern.

83. LEAST TERN.

Our smallest Tern, 9; entire upper parts including tail, pale pearl-gray; top of head (excepting lunette on forehead), and two

Fig. 87



Roseate Tern young. 1-10.

outer primaries black; white beneath; bill, yellow black at extreme tip, fig. 88-89; feet, yellow; in winter, white of lunette more extended. Young with a patch of dusky on wing and V-shaped marks of dusky on back; tail not as deeply forked. Beeds from south shore of Mass. (formerly Ipswich), southward from late May (Bahamas) to early July (Mass.) South in Sept., north in May

and June; winters south of U. S. Cries, *Tee-deel-deedle*; alarm a decidedly given *Hoyt* repeated irregularly, flight rather jerky.

Fig. 88



Least Tern.

Dusky-backed Terns.

Size, rather large; mantle and head dusky or black; bill, slender and with feet wholly black; tail deeply forked. Flight, swift with long, sweeping wing-beats, single egg lighter than in the preceding groups.

84. BRIDLED TERN.

Length 14; pale slate above; white collar on back of neck; crown, black, lunette of white of forehead the horns of which extend over and just back of eye, fig. 90: beneath, pure white. Young have white of forehead more extended and the back is grayish more or less streaked with white.

Fig. 89



Least Tern. 1-6.

Cries, shrill, ordinary note "*killick*" often repeated: alarm a croak: signal for flock to dart downward when flying is a shrill, snarling cry, see page 107. Tropical sea coasts in general; breeds commonly on Bahamas in May, placing egg in cavities beneath

rocks, comes north in April, goes south in in fall. Accidental in Fla.

85. SOOTY TERN.

Larger than last: 16; not as slender; black above; horns of lunette not extending back of eye, fig. 91. Young, sooty brown throughout paler below; wing coverts and

Fig. 90



Bridled Tern. 1-6.

scapularies narrowly but distinctly tipped with white. Ordinary note, *Quank* repeated irregularly; alarm, *Qu-ank* rapidly repeated, signal cry for darting downward like that of last species.

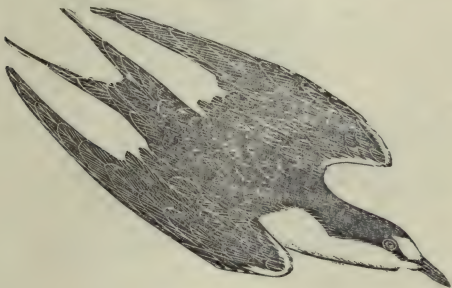
Flight heavier and less graceful than that of Bridled Tern. Range similar, but

breeds commonly on Tortugas, Fla., and occurs regularly but rarely along the coast of S. C., casually to N. E.

Short-tailed Terns.

Small, dark above and sometimes below; tail, shorter than tips of folded wings and but slightly forked. Eggs, 3-4 averaging darker than others of the family.

Fig. 91



Sooty Tern, 1-6.

86. BLACK TERN.

Length, 9; black throughout with under portions of wings and under tail coverts, white, fig. 92. Winter, head, excepting

occiput, neck all around and below white. Young, brown plumbeous above, white on forehead and below with sides plumbeous. Flight very light and graceful as it hovers closely over water. Breeds in interior from middle U. S., west of Alleghanies, northward

Fig. 92



Black Tern. 1-4.

in May. South in May and Sept. when not uncommon on coast of N. E. and near it; rare here in June. Winters in S. A.; north in May.

87. WHITE-WINGED BLACK TERN.

Differs from above in having tail and upper coverts white and wings whitish in

all stages. Europe, a single one taken in Wis. a number of years ago.

88. NODDY.

Large, 15; tail, much rounded; sooty brown throughout, white on top of head, fig. 93; bill and feet, black. Flight rather erratic, with long, sweeping wing-beats,

Fig. 93

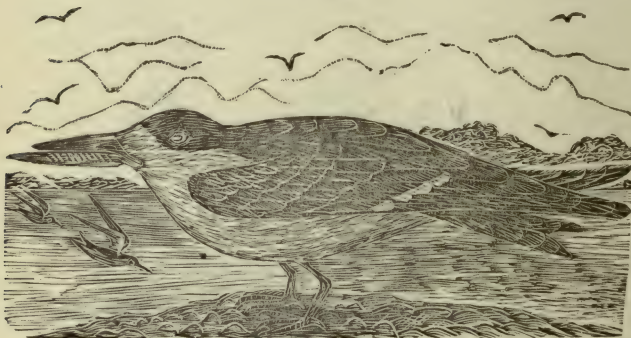


Noddy. 1-5.

keeping low over water when it somewhat resembles a petrel; when sitting, unlike other terns which usually keep head on a level with body, holds head high like a dove. Cries, a series of croaks. A gentle bird which

may be taken from its nest without making an effort to defend itself. Intertropical seas; breeds on the Tortugas and Bahamas in May; rare on coasts of South Atlantic and Gulf States.

Fig. 94



Black Skimmer. 1-5

SKIMMERS.

Birds with a Tern-like appearance having long wings and a short slightly forked tail; bill singular, thin and knife-like with under mandible over-lapping upper, fig. 94.

89. BLACK SKIMMER.

Large, 18; white beneath, on tail and forehead, black elsewhere above; bill, black with base and feet vermillion. Young whitish on head and tail tipped with brown-

Fig. 95



Red Phalarope.

ish. Rests in large flocks on isolated sandbars by day and when started moves with an excentric flight with long sweeping wingbeats; at nightfall separates into small com-

Fig. 96

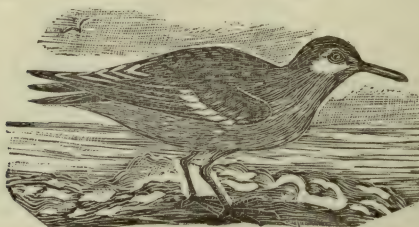


Red Phalarope

panies, and forming lines, sweeps up estuaries and rivers against tides or current, keeping close to water with the elongated lower

mandible below surface, thus secure what food floats on surface. Cries harsh and abrupt, much like the bark of a young puppy or fox. Eggs placed on sand near sea; 2-3, white handsomely mottled with dark-brown and lilac. Coasts of warmer portions of America breeding on Atlantic

Fig. 97



Adult ♀ Red Phalarope. 1-4.

side from N. J. southward in May. Winters from Fla. Keys northward.

SHORE BIRDS.

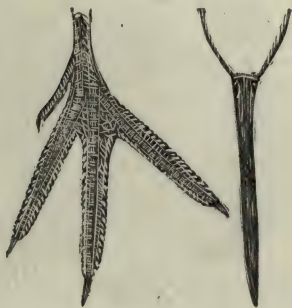
Long-legged and usually long-winged with elongated tertiaries; bill variable but quite long and slender; size, also variable but never very large. Eggs, usually 4, pyriform, almost always placed on ground.

Young, covered with down and active when hatched. Inhabit nearly all regions of the globe.

PHALAROPES.

Sandpiper-like with duck-like habits; breed far inland, but pass a greater portion

Fig. 98.



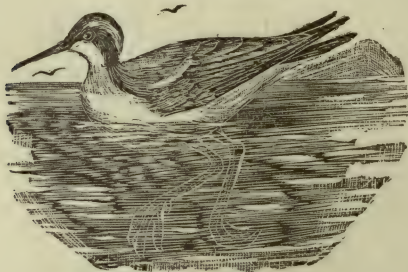
Wilson Phalarope.

of lives on open ocean upon which their thick plumage enables them to float readily, while their lobed toes enable them to swim with ease. Sexes, dissimilar the females, being brighter than males; gregarious.

90. RED PHALAROPE.

Median size, 8, bill short and thick, fig. 95; toes, well lobed. Summer female, purplish cinnamon beneath and on neck behind, sides of head and rump, white; top of head, dark plumbeous; back, light reddish streaked with black, fig. 97. Summer male

Fig. 99



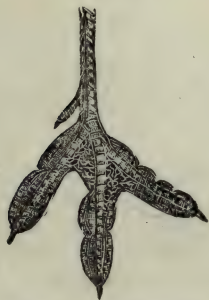
Adult ♀ Wilson Phalarope. 1-4.

smaller and duller. Winter adult, head, neck and lower parts, white; back, pearl-gray. Young, black above and white beneath, tinged with buff. Occurs in Northern Hemisphere, breeding far north; south in winter in N. A. as far as off coast of N. E. in Sept., Oct., and May; rare in the interior.

91. WILSON PHALAROPE.

Smaller than last, bill long, slender and awl-like, fig. 98; has toes less lobed, fig. 98. Summer female, white beneath, gray-white above, becoming white on upper tail coverts and a portion of tail; line of black on side of head becoming chestnut on sides of neck

Fig. 100



Northern Phalarope.

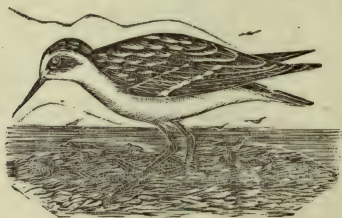
and broadening on back, fig. 99. Summer male, duller. Winter adult ash-gray above, white on upper tail-coverts and beneath. Young, similar but blackish above. Temperate N. A. breeds, from Southern Ill. and and Utah north to Saskatchewan region.

Winters off coasts of Brazil and Patagonia. Rare on coast of N. E. in May and Aug.

92. NORTHERN PHALAROPE.

Smaller, 7.50; bill smaller, foot more lobed, fig. 100. Summer female, black above, white on rump; distinct wing band and under parts white. Sides of neck and chest rufous,

Fig. 101



Northern Phalarope. 1-4.

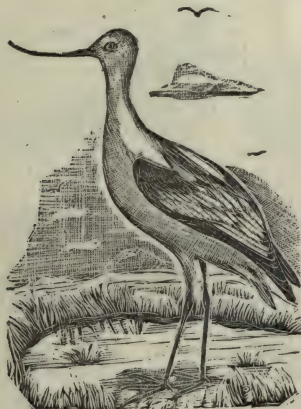
fig. 101. Summer male, duller. Winter adult grayish above with blackish patch on sides of head, forehead, line over eye and beneath, white, young, similar, but streaked with buff above. Northern Hemisphere, breeds far north; winters, from coast of N. C. southward. Common off coast of N. E. from

middle Aug. to Oct.; occasionally seen on beaches and rarely on waters of interior; comes north in May.

AVOCETS AND STILTS.

The longest legged of any of the Shore Birds; social and occur near fresh water; size rather large.

Fig. 102



American Avocet 1-4

93. AMERICAN AVOCET.

Length, 17; bill longer than head and decidedly recurved; folded wings not quite

reaching end of tail; head, neck and chest light cinnamon, wings and two broad stripes on back, black; tail, ashy; elsewhere white, fig. 102; in winter cinnamon is replaced by white. Swims well and frequently alights

Fig. 103



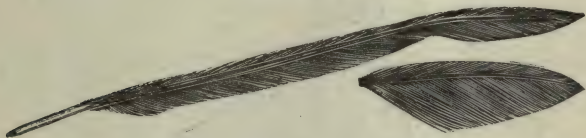
Black-necked Stilt. 1-4.

on water. Cries, harsh and continuous. Breeds in the interior west of Mississippi River from Kansas north to Saskatchewan and Great Slave Lake; winters south to Guatemala; exceedingly rare in eastern U. S.

94. BLACK-NECKED STILT.

Size, 14; bill longer than head and nearly straight; top of head to middle of back and wings, black; tail gray; spot behind eye and plumage not mentioned, white; bill, black; iris, red; feet, crimson; fig. 103. Female with back brownish. Young differ from last in having back banded with dull

Fig. 104



American Woodcock.

white and top of head finely mottled with it. Breeding note a loud *put* repeated many times at regular intervals as the bird either sits or flies; alarm, a series of harsh screams. Flight, steady, not swift, wing-beats rather slow and low sweeping. When on the wing, the head is held partly back, but the legs are fully extended or in short flights are held dangling. Although it often wades in

water so deeply that it nearly floats, it seldom swims. A number will sometimes sit together in the water moving the primaries up and down with a fan-like movement while the secondaries are kept motionless. Breeds from northern U. S. west of the Mississippi southward to Fla., the Bahamas, and Antilles in late April and early May.

Fig. 105



American Woodcock. 1-6.

Common but rare in Eastern U. S. north of Fla. Arrives in Fla. in March, goes south in early Oct.

WOODCOCK AND SNIPE.

Birds of fresh water swamps and marshes. Bill much longer than head; wings and legs,

short; tail, short and rounded, All of the species are well-known game birds. Sexes similar.

95. AMERICAN WOODCOCK.

A short-necked stout-bodied species 11 long which lives in wooded or bushy swamps.

Fig. 106



Wilson Snipe..

Wings very short folding, at base of tail, with the outer primaries much narrowed,

Fig. 107



Wilson Snipe r. 1-6.

fig. 104; brown above with the buffy bars crossing top of head, elsewhere faintly

banded with reddish buff and mottled with ashy brown; beneath, reddish-buff; bill and feet, brown, fig. 105. Downy-young, rust-buff throughout mottled and spotted above with brown. Often occurs in alder swamps. Flight direct and swift, wing beats rapid

Fig. 108

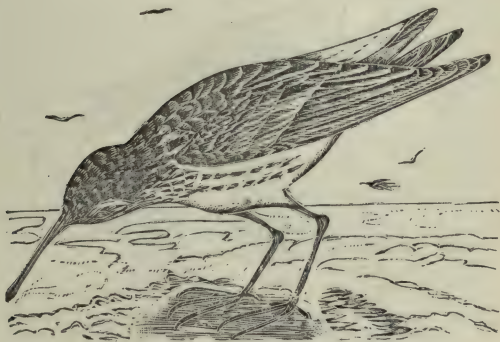


Dowitcher. 1-6.

often accompanied by a whistling sound. From early March to July gives the evening flight song on or near feeding ground. After giving a series of bleating cries on ground the male bird rises in a huge ever-narrowing spiral until at its apex he is directly over where he started; he then

discends on rocking wings to his starting point, giving a continuous melodious subdued whistle. The performance is often repeated many times during the evening, but great caution is necessary in approaching the bird as he is easily alarmed.

Fig. 109



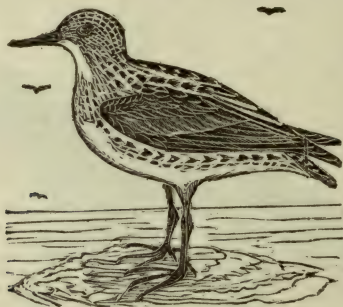
Stilt Sandpiper. 1-3

Breeds throughout eastern N. A. from Fla., north to Canada in March and April. Often nests in birch or alder swamps. Goes south in Oct. and Nov.; north in late Feb. and March. Once common but becoming rare.

96. EUROPEAN WOODCOCK.

Differs from last in being larger, 13, and in being distinctly banded beneath. Northern Eastern Hemisphere; occasional in Eastern N. A.

Fig. 110



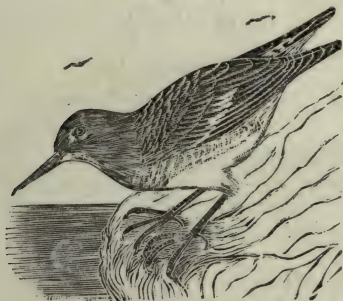
Knot. 1-5.

97. WILSON SNIPE.

More slender than Woodcock but about the same length; grayer above, mottled and streaked with darker; crown with a divided line of lighter; white beneath with a band of dusky streaks across breast; a subterminal band of chestnut on tail, fig. 107. Occurs in open fresh water marshes; when startled

rises quickly and flies swiftly in a zig-zag course uttering a bleating *scape* as it goes and showing the under wing marking which are banded with black and white, the black being as wide or wider than the white; when high in air winds are circles about, but

Fig. 111



Purple Sandpiper. 1-5.

is quite apt to return and alight near where it started. In spring on its breeding ground and sometimes in migration, can be heard producing the sound called winnowing; it rises high in air sometimes singly, but often three or four together and flying in a zig-zag way utters a soft bleating cry. Breeds from

northern U. S. northward, occasionally further south. Winters from N. C. south to northern S. A. North in April and May; south in Sept. and Oct., but sometimes remains in Mass. into Nov.

98. EUROPEAN SNIPE.

Differs from last in having the white bandings on wing lining wider than the

Fig. 112



Pectoral Sandpiper.

dark interspaces. Europe, northern Asia and Africa, frequent in Greenland; accidental in Bermuda.

SANDPIPERS, ETC., ETC.

Occur chiefly in marshes, either salt or fresh or on sea beaches, occasionally in dry

fields but never in wooded swamps. Folded wings reaching beyond tail. Highly gregarious in habit. Summer and winter plumage different, but sexes similar. General flight swift and direct with a rapid wing-beats; turning and wheeling in air is performed

Fig. 113



White-rumped Sandpiper. 1-4.

with ease and grace large flocks moving with a regularity which is surprising. All species run swiftly; although none when adult swim voluntarily when uninjured, wounded birds and young often enter the water and swim with ease.

99. DOWITCHER.

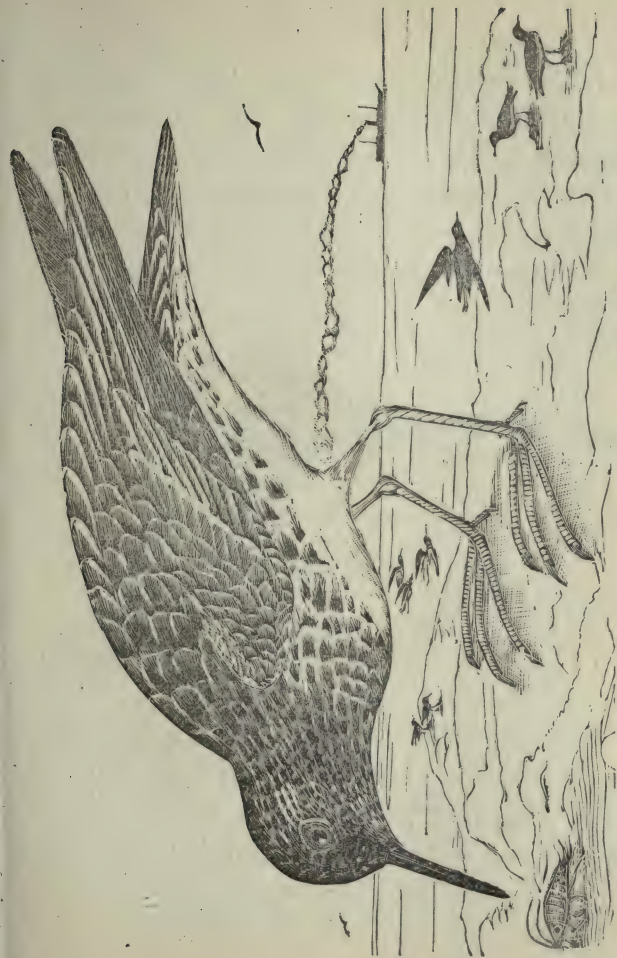
Bill very long, 2.35, nearly twice the length of the head; size, medium, 10, Summer; cinnamon throughout streaked with brown above spotted with dusky beneath; lower back, rump and tail white, banded with dusky; bill brown; feet, greenish; fig. 108.

Fig. 114



Baird Sandpiper.

In winter the color above is plain gray; white beneath banded on lower neck and sides with gray. Young are darker above tinged on both surfaces with reddish buff. Note a mellow whistle uttered as the bird rises and when on the wing; this call is often followed by one or two others which are low and querulous. Occurs about muddy



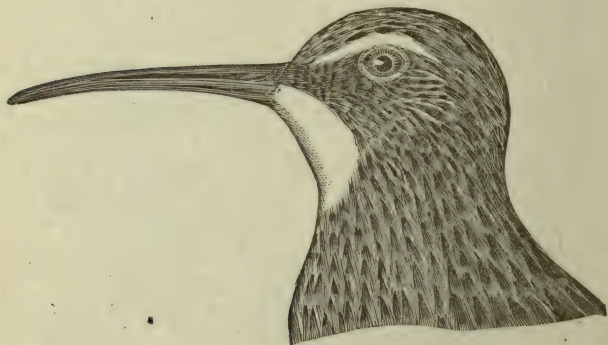
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Fig. 115—Least Sandpiper.

spots on salt marshes and sloughs, singly or in flocks, some of which are very large. When feeding probes with bill by pushing it straight downward often putting its head under water. Tame and easily approached.

Eastern N. A. breeding far north, passes

Fig. 116



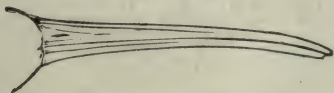
Red-backed Sandpiper.

south chiefly along the coast in July and Aug. Winters from N. C. to the W. I. and Brazil; north in May; abundant at this season in the Bahamas but not as common further north.

100. LONG-BILLED DOWITCHER.

Differs from last in having bill longer, 3.10, and being deeper in color beneath where there are few or no blotches, western N. A. breeding in Alaska and near Arctic coast, south through western U. S. including the Mississippi Valley, and less commonly along Atlantic coast to winter in Mexico.

Fig. 117



Curlew Sandpiper.

101. STILT SANDPIPER.

Slender, 9; bill, longer than head; summer, tail, white; remaining upper parts dusky brown streaked and banded with dusky; patch on side of head, reddish; white beneath, banded with dusky. Winter grayish above, no reddish spot on side of head, beneath, white unbanded, fig. 101. Young, more buffy above than last and with a buff tinging on breast. Note, a chuckling whistle.



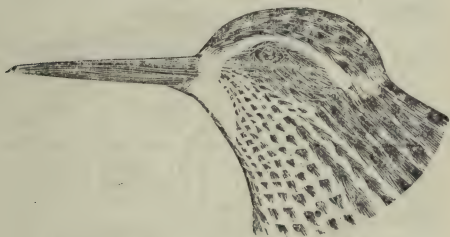
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Fig 118—Semipalmated Sandpiper.

Flight, swift and direct with rapid wing-beats. Occurs often with Dowitcher in similar places. In feeding, habitually puts head wholly beneath water. For comparisons with Lesser Yellowlegs, see that species..

Eastern N. A. breeding north of the U. S. Winters in S. A., south in July when

Fig. 119



Western Sandpiper.

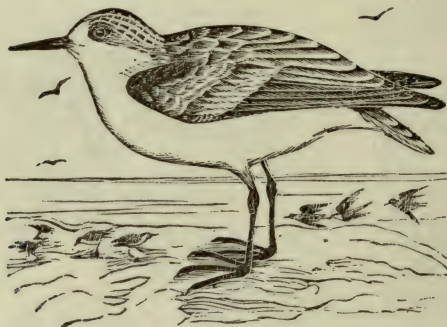
it is not uncommon on coast of Mass.; north in April when common in Fla. but rare further north on the coast.

102. KNOT.

Rather stout, 10.50, with rather short, quite thick bill. Summer, ashy-gray above, mottled with dusky and reddish; upper tail

coverts, white banded with dusky; pale cinnamon beneath narrowly streaked on breast and banded on sides with dusky, fig. 111; bill, brown; feet, greenish. Winter silvery gray above; white beneath tinged with yellowish. Young differs from winter in

Fig. 120



Sanderling. 1-4.

being without the yellowship tinge below. Note, a clear, double whistle not loud nor often given in migration. Occurs on sandy beaches in small flocks, by itself or singly in company with other beach birds. Northern Hemisphere, breeding far north; goes

south on the Atlantic coast of N. A. from middle July until Nov. Winters from N. C. southward, but is not found on the Bahamas and is rare in the W. I.; north in May, when not uncommon on south shore of N. E. but rare north of Cape Ann.

Fig. 121



Lesser Yellow-legs. 1-5.

103. PURPLE SANDPIPER.

Stout, short-legged, 8.50; bill about as long as head; summer appearing nearly black above and white below; with breast and sides strongly overwashed with gray-

ish; bill dark brown, orange at base; feet, greenish yellow, fig. 109; winter and young with dark upper parts obscured with grayish which is more extended below; upper tail coverts and rump black in all stages. Note, a feeble whistle. Northern portion

Fig. 122



Solitary Sandpiper. 1-4.

of Northern Hemisphere, breeding far north; migrating south in N. A. in Oct.; appearing on the coast of N. E. about Nov. 1. Winters from Canada, south to the Great Lakes and upper Mississippi Valley and on the Atlantic coast locally from Grand Menan to the south shore of N. E., more rarely to N. J. and

casually to Fla. Occurs most frequently on rocky islands; goes north in April but occasionally remains until May.

104. PECTORAL SANDPIPER.

Rather stout, 8.50, bill about as long as head; summer, dark brown above with

Fig. 123



Willet. 1-4.

feathers margined with brownish buff; white beneath; foreneck and breast clouded with buff streaked with dusky; bill, brown; feet, greenish, fig. 113. Winter more obscured

with buff above. Young more rusty above and more buff below; rump and upper tail coverts always dark. For comparison see White-rumped Sandpiper. Note, a rolling whistle, often given harshly and gratingly. Flight, when startled swift and erratic,

Fig. 124



Ruff. 1-5.

something like that of Wilson Snipe. Occurs with other Sandpipers about sloughs and among the grass of salt marshes where it has the habit of squatting to hide when approached. Breeds in the Arctic of N. A.

south from the middle of July until the first of Nov. when abundant on coast and rather common in interior, not common on Atlantic coast south of N. J. Winters far south in S. A., north in May when rare on coast and common in interior.

Fig. 125



Bartramian Sandpiper. 1-3.

105. WHITE-RUMPED SANDPIPER.

Smaller than last, 7, more slender; summer, rump and upper tail-coverts white, grayer above, tinged with reddish; no decided clouding across breast, fig. 113, as in the last. Winter with no reddish tinge above. Young more reddish above and buffy

below. Note a short, sharp whistle. Flight, ordinary. Occurs on beach, salt marsh and margins of pounds near sea. Occasionally occurs in small flocks but are usually found with other sandpipers. Eastern N. A. breeding far north; winters in southern S. A.

Fig. 126



Buff-breasted Sandpiper. 1-4.

casually as far north as Fla. This is the Bull Peep of sportsmen.

106. COOPER SANDPIPER.

Differs from last in being larger, 9.50, in having only a trace of reddish above, and in having conspicuous V-shaped marks of black on upper tail coverts. Only a single

specimen known, obtained on Long Island, N. Y., May 24, 1833.

107. BAIRD SANDPIPER.

Similar to Pectoral but smaller, 7.25, and with weaker bill, fig. 114, is much paler below and there are fewer streakings on

Fig. 127



Spotted Sandpiper. 1-4.

breasts. Young have all of the feathers above narrowly and abruptly margined with pale grayish buff which is conspicuous enough to give the back a scaled appearance. Note not unlike that of Pectoral but weaker. Breeds in Alaska and on the Barren Grounds;

goes south in Aug. and Sept., but chiefly through the interior of the Western States; rare on the Atlantic coast from N. E. southward; north in April, but always through the interior.

Fig. 128



Marbled Godwit.

108. LEAST SANDPIPER.

Smallest of our Sandpipers, 6.15; in spring much like a small edition of the Pectoral, but not as much clouded nor streaked on breast, fig. 115; winter, grayish above but with dark markings prominent and with buffy clouding on breast. Young

with much rufous above and the breast decidedly buff. Bill always brown and feet greenish yellow. Ordinary call a trilling whistle; also gives a low piping note when feeding, besides these gives sweet tremulo calls as a flight song. This is the Peep or

Fig. 129



Hudsonian Godwit. 1-6.

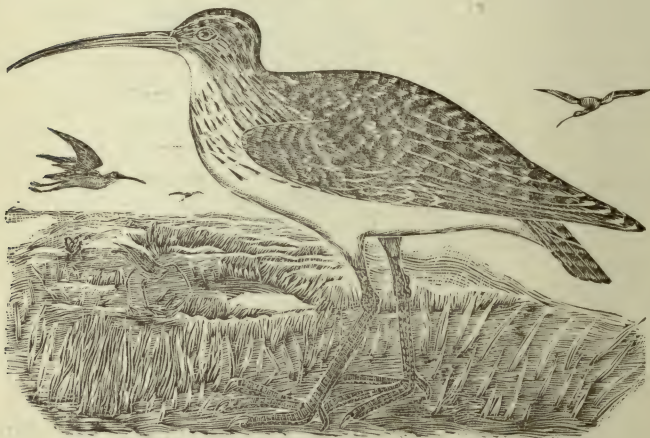
Mud Peep of gunners and is very abundant, occurring most frequently about ponds on the marshes and in sloughs; less seldom on fresh waters and sea beaches. While it sometimes occurs singly or in small companies, it also occurs in flocks from 100 to 500 or more. Breeds north of the U. S.;

passes south in July and Aug.; winters from N. C. southward into S. A.; comes north in May.

109. RED-BACKED SANDPIPER.

Larger, 8.25; bill longer than head and curved, fig. 116. Summer, above red dis-

Fig. 130



Longbilled Curlew. 1-8.

tingly spotted with black; wings, gray; white beneath, with large patch of black on belly. Winter, ashy above, white beneath

with breast tinged with ashy. Young show traces of rufous. Upper tail coverts, bill and feet always black. A very unsuspicious species that occurs on sandy beaches more often than elsewhere, sometimes singly but more often in flocks or in company with

Fig. 131



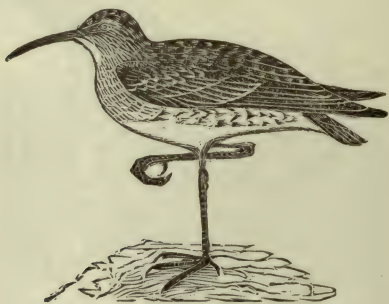
Hudsonian Curlew. 1-8.

other Shore Birds, call, a rather plaintive, melodious *Purre*; when alarmed utters a short cackling cry. N. A. breeding far north; goes south from Sept. to Nov.; winters from N. C. southward; north in May. Abundant on Atlantic coast in fall but rather uncommon in spring north of N. C.

110. DUNLIN.

Differs from the Red-back in having less red above, the black markings predominating, is more heavily streaked with black below, but black of belly is less conspicuous. Northern parts of Old World; accidental in eastern N. A.; one record for Mass.

Fig. 132



Esquimo Curlew. 1-8.

111. CURLEW SANDPIPER.

About size and form of last with bill slightly curved, fig. 117; summer, upper tail coverts white; tail gray, lower parts reddish chestnut; upper parts varied with blackish and rusty. Winter, not dissimilar

to Red-black at this season but the upper tail coverts are white, not black as in that species. Old World, occasional in eastern N. A. and Alaska. There are a number of N. E. records.

Fig. 133



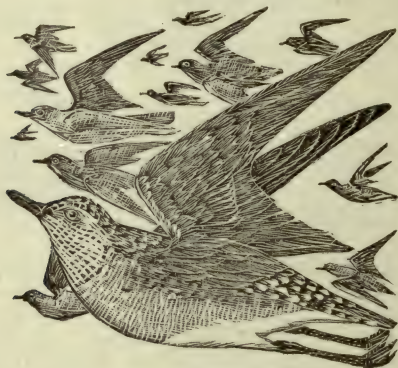
Black-bellied Plover, 1-8.
(Adult, young in flight.)

112. SEMIPALMATED SANDPIPER.

Differs from the Least Sandpiper in being larger, 6.75, bill, 75; grayer above with only a slight tinge of reddish on sides of head in spring and with no clouding below, but a few streakings on breast,

fig. 118. Winter there is no buff or reddish anywhere. Young, slightly marked with reddish above; the breast is slightly clouded with no streakings; bill and feet, black. Are abundant species both spring and fall

Fig. 134



Golden Plover, 1-8.

all along our coast and often on fresh water of interior frequently occurring in flocks of hundreds. Ordinary note not unlike the peep of the Least Sandpiper and a low rolling note given both when sitting and in flight; in spring gives a series of musical

notes, a kind of love song as the bird advances with down-curved pinions and rapid wing-beats. Occurs throughout eastern N. A. breeding north of the U. S.; comes south from middle of July until Nov.; winters from N. C. through the Bahamas and W. I.

Fig. 135



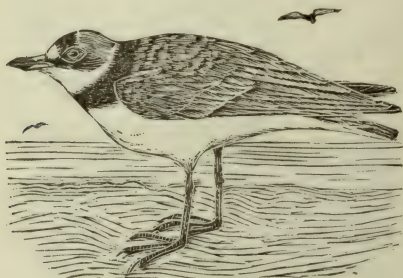
Killdeer. 1-3.

to S. A.; north in May. Stragglers of this species and of a number of other sandpipers that usually go north of us are often found in Mass. all summer. Sportsmen call this species, Peep, Black-legged Peep and Sand Peep.

113. WESTERN SANDPIPER.

Similar to the Semipalmated but bill longer and stouter, and in spring upper parts and head marked with bright cinnamon and distinct streaks and triangular spots of dusky which extend along sides, fig. 119, in fall distinguished by a longer and

Fig. 136



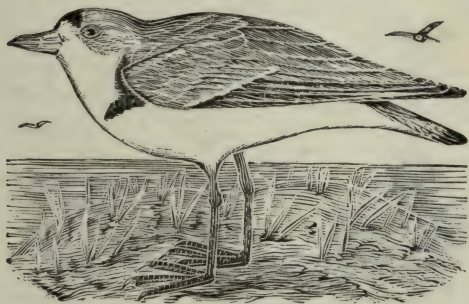
Semipalmated Plover.

larger bill. Breeds far north in western N. A., goes south about the same time as the Semipalmated and winters in the same sections; common in Fla. in winter and spring but uncommon further north; a few occur along the coast in fall as far north as N. E., but not in spring.

114. SANDERLING.

A medium sized, 7.50, stoutish three-toed Sandpiper with a rather short bill. Summer, light rusty above and anteriorly below, spotted and blotched on back and breast with dusky; white wing band and

Fig. 137

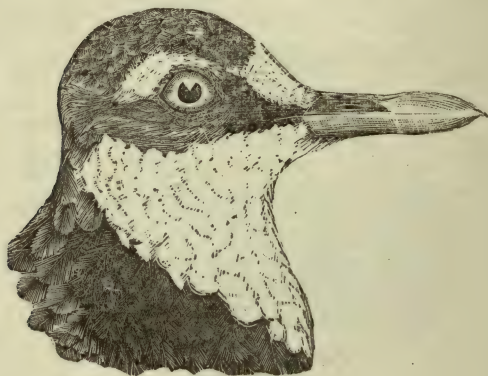


Piping Plover. 1-3.

conspicuous patch of black on bend of wing. Winter, the whitest of our Sandpipers; pale gray above, under parts pure white then dark patch on wing is very conspicuous, fig. 120. Young differ from winter adult in being slight mottled with black above but are pure white below; bill and feet,

always black. Common on sand beaches from middle July to middle Nov. often occurring in large but straggling flocks. Winters from N. C. to Patagonia; goes north in May when it is less common. An un-

Fig. 138



Wilson Plover.

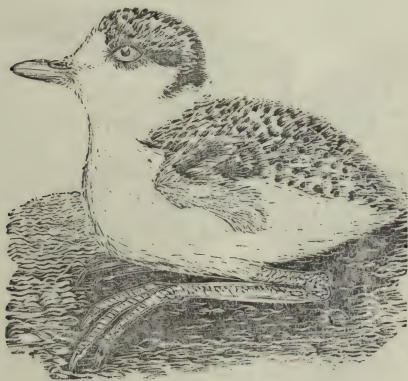
usually silent bird, the sounds emitted being a squeaky whistle and low conversational notes when feeding.

115. GREATER YELLOWLEGS.

One of our largest Shore Birds, 14; bill longer than head, 2.25; neck and legs long;

summer, upper tail coverts white banded with dusky; dark gray above spotted with yellowish white; white beneath, streaked and spotted on lower neck and banded on sides, axillaris and under wing coverts with

Fig. 139



Wilson Plover, Young.

dusky; winter and young not noticeably different. Bill, black; feet and legs, yellow. Occurs on marshes and mud flats, where it makes itself conspicuous, especially in flight, by its loud, clear whistle which consists of three or four notes and is frequently uttered;

beside this call it gives a kind of scream in spring, something like put of the common Tern, and a rolling or scolding note. Common on the coast and not unfrequent in the interior near water. Flight, steady with long wing beats varied with intervals of sailing.

Fig. 140



Turnstone. 1-5.

In settling, the bird sails then suddenly alights by dropping its long legs; when down it often raises its long wings over its back. Breeds in northern N. A., goes south from July 15 to Aug. 15; winters from N. C. southward, north in April and May.

116. LESSER YELLOWLEGS.

Smaller than last, 10.25, color very similar, fig. 121. Calls not very different but the whistle usually consists of two notes and these and the roll are not as loud; the whistle is sometimes given as continuous

Fig. 141



Oyster-catcher. 1-10.

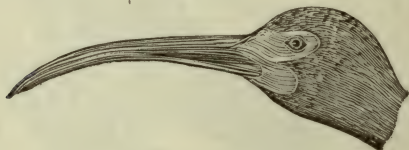
repetitions as bird sits. Breeds far north in N. A.; comes south from July 1 to Sept. 15, when it is common along the coast and not infrequent in the interior; winters in southern S. A.; rare in Fla. at this season; north

in April and May, when uncommon on Atlantic coast but abundant in Mississippi Valley.

117. GREENSHANK.

Differs from Greater Yellow legs in having the lower back and rump pure white without markings. Eastern Hemisphere, breeding far north; accidental in Fla.

Fig. 142



White Ibis. 1-20.

118. SOLITARY SANDPIPER.

Slender, small, 8.50, bill, slender; summer, upper tail coverts, dark but tail is broadly branded with white; dark above finely marked with white, white below distinctly streaked on lower neck, breast and sides with dusky; bill, black; feet, dark greenish, fig. 122; winter but slightly differ-

ent, young rather lighter. Note, a whistling *peat* repeated four or five times when the bird is on the wing; flight rather rapid, not very direct with wings kept high and thus beats are strong. Teters somewhat when sitting but not as much as does the Spotted Sandpiper. Breeds occasionally in northern

Fig. 143



Roseate Spoonbill. 1-4.

U. S. but more commonly further north; goes south in Aug., Sept. and Oct. Winters in extreme southern states, the W. I. and northern S. A., north in April (Bahamas, rare) and May. Occurs on fresh waters, usually ponds and pools, in pairs or at best in small companies of five or six, never in large flocks.

119. GREEN SANDPIPER.

Differs from the last in being a little longer, 10, and in having the middle tail

Fig. 144



Glossy Ibis. 1-16.

feathers broadly banded with white and the upper tail coverts pure white. Places its eggs in the abandoned nest of some tree-building bird, and our closely allied Solitary probably has the same habit. Northern parts of Old World; accidental in eastern N. A.

120. WILLET.

Large, 14, stout with long, thick bill and large feet. Summer, brownish buff varied with dark brown. There is a large white patch on wing and the axillaries and wing linings are black, best seen in flight,

Fig. 145



Bittern. 1-20.

fig. 123; white beneath, head and sides streaked and banded with dusky; bill, brown; feet, bluish. Winter, without bands or spots above or below. Young more yellowish above and on sides. A noisy bird constantly crying *Pillie-willie-willet* in loud, shrill tones,

also gives a loud rasping cry and a chuckling note when alighting. Occurs singly, in pairs, or in small flocks, on mud flats or sandy beaches. Occasionally perches on dead branches of trees. Flight rather slow and direct; wing-beats strong and well down, not rapid. Breeds from N. J. to Fla. and

Fig. 146



Least Bittern. 1-6.

irregularly north to N. E. Resident from N. C. southward and in the Bahamas, uncommon on the coast of Mass. in fall and rare in spring.

121. WESTERN WILLET.

Larger than last with a longer more slender bill, and with fewer and paler band-

ings in summer. Interior of N. A. from the Mississippi to the Rocky Mountains. Winters on south Atlantic and Gulf coast.

122. RUFF.

A large, 11, stout Sandpiper, males of which are remarkable in having a cape of elongated feathers about neck and a ruff above it, fig. 124; face naked. Color variable, ruff and cape, either chestnut, buff, black or white, plain, streaked or barred; beneath and on sides of rump, white. - Female, without ruff or cape; plumage, barred with black, white and rusty; white beneath. Northern parts of eastern Hemisphere, occasional in eastern U. S. but chiefly on coast.

123. BARTRAMIAN SANDPIPER.

Rather large, 12, with short slender bill; neck long; buffy throughout, darker above spotted and barred with black, fig. 125. Call note, a clear, rather shrill whistle. Flight strong and direct, with comparatively slow wing-beats. Breeds in the far north in N. A.; goes south in Aug. at which time it is not

uncommon on the coast of Mass., frequenting hills near the sea.

The upland Plover, the popular name of this species, frequents hill tops near the coast, especially in Autumn, both in N.E.

Fig. 147



Ward's Heron. 1-12.

and further South, but when breeding is found in fields.

124. BUFF-BREASTED SANDPIPER

Rather small and slender, 8, with a short bill; buffy mixed with black above and

spotted with it below, fig. 126, axillaries and wing lining white, showing in flight. Young have feathers bordered with white. Flight rapid, but rather flitting. Call, a clear whistle given when on the wing. Breeds in the far northern interior of N. A. where it is abundant; goes south in Aug. and Sept., but in fall appears to be nowhere common; winters in S. A., north in May when seldom if ever found on Atlantic coast. An inconspicuous species.

126. SPOTTED SANDPIPER.

Rather small, 7.50; short legged; bill, medium; white beneath, marked with rounded spots of dusky; broad band through wing, white; greenish brown above streaked and spotted with dusky, fig. 127; tail tipped with white and outer feathers are banded with same; in winter is without bandings above or spots below, fig. 127. Young with buff bandings on wings and tail. Downy young yellowish gray above, with narrow black line down back and on either side of

head; white beneath. Flight direct but slow, the wing tips being held below the level of the body and vibrated quite rapidly. In passing over water flies close to surface and if attacked by a hawk dives into it out of sight, to afterwards emerge flying. Occurs singly or in small companies in late summer or autumn, never in large flocks on both salt and fresh water. Goes south in late Oct., stragglers remaining into Nov. as far north as Mass., winters sparingly from N. C. to Fla., common from this point, and on the Bahamas, southward to southern Brazil; north in April.

126. MARBLED GODWIT.

Large 18.50, with a very long, 4, somewhat recurved bill; pale cinnamon, throughout, streaked on head and neck and irregularly banded elsewhere with dusky, fig. 128. Young, without markings beneath. Cries in spring a series of shivering notes; in winter when alarmed, harsh and discordant. Breeds in interior from Iowa and Neb.

northward to Manitoba and Saskatchewan where it occurs on dry prairies. Goes south in Aug. and Sept. when accidental or very rare on the Atlantic coast from Mass. to N. C.; formerly wintered commonly in northern and middle Fla. on both coasts, now rarely

Fig. 148



White Heron. 1-30.

found on the east coast, but occurs on the west coast and in Guatemala and Yucatan; north in April. Is found on the borders of pools of both salt and fresh water and on mud flats in flocks as in eastern Fla. up to 1877 and probably somewhat later.

127. HUDSONIAN GODWIT.

Smaller, 15, upper tail coverts always pure white; tail black; otherwise chestnut spotted with dusky; axillaries, black, fig. 129. In winter chestnut replaced by gray. Young more buffy. Breeds far north in eastern

Fig. 149



Snowy Egret, 1-8.

N. A.; south in Aug. and Sept., when uncommon on coast of N. E.; winters in extreme southern S. A.; north in April and May. Frequents mud flats, sloughs and beaches. Flight, swift and direct. Note, low and double.

128. BLACK-TAILED GODWIT.

Differs from last chiefly in having axillaries white. Europe, accidental in Greenland.

129. LONG-BILLED CURLEW.

Larger, 24; bill, strongly curved varying in length from 3 to 8; cinnamon throughout but more reddish below, marked above and streaked below on neck, breast and sides with dusky; fig. 130. Breeds through the interior of temperate N. A.; south in Sept. when formerly not uncommon on coast of N. E. now seldom, if ever, found here; winters chiefly in Guatemala; formerly, up to 1877 and somewhat later was common at this season from N. C. to middle Fla. now none occur over this section; north in April. Note, a shrill, scream-like whistle. Flight, slow with long sweeping wing-beats.

130. HUDSONIAN CURLEW.

Smaller, 17, paler. There is a superciliary and central line on head, axillaries banded with dusky. Breeds in far northern

N. A.; south in Aug. when not uncommon on coast of N. E. and southward, sometimes remaining until Oct.; winters all over S. A. call note, a clear whistle, fig. 131. Flight, strong and direct with rather slow wingbeats.

Fig. 150



Green Heron. 1-5.

131. ESQUIMO CURLEW.

Smaller, 13.50, bill 2.25; differs from last in color in absence of buff on crown and in having markings on side arrow-shaped, fig. 132. Call note, a soft, mellow whistle given in flight. Moves in large, dense flocks, sweeping about much as sand-

pipers do. Breeds far north in eastern N. A., south in Aug.; when it was once abundant on coasts of Labrador and south to N. E., now exceedingly rare and on the verge of extinction; winters in southern S. A., north in April when it avoids the Atlantic coast, passing through the Mississippi Valley and westward to the plains.

132. WHIMBREL.

Differs from the Hudsonian Curlew in having the rump and axillaries white, the latter banded with black. Northern parts of Old World, occasional in Greenland.

PLOVER.

Differs from other Shore Birds in having shorter bills and necks, and larger heads; toes, three.

133. LAPWING.

About the size of the Black-bellied Plover, 13; wings round, head crested, top of head and forehead, throat and breast, blue-black; back, metallic green, bluish and

purple; upper and lower tail coverts, rufous; tail, black with basal half and tip, sides of head, neck and belly, white; in winter the throat is black. Active and noisy. Northern parts of Eastern Hemisphere; occasional in Greenland and on Long Island.

Fig. 151



Louisiana Heron. 1-6.

134. BLACK-BELLIED PLOVER.

Our largest Plover, 12. Summer, lower parts and sides of head, black; forehead, sides of breast, upper and under tail coverts, white; above irregularly spotted with dusky and white, fig. 133; bill and feet, black; in winter gray above, white beneath. Young, like last but have the back spotted with

yellow.; in all stages the axillaries are black. Breeds in the northern portion of northern Hemisphere, south from middle July to Nov. 1; winters from N. C. and Bahamas south through the West Indies into S. A. Common on coast, rare in interior. Frequents beaches, but is sometimes seen on mud flats. Notes, a wild, sweet whistle, also gives a chuckling sound when alighting. Flight, swift and strong with rapid wing-beats. Occurs singly or in small flocks.

135. GOLDEN PLOVER.

Smaller, 10.50, bill, more slender, the axillaries are always gray and the back spotted with golden yellow; in winter and young, grayish beneath, fig. 134. Breeds in Arctic America; south in Aug. and Sept. when common on coast of Labrador, rare in N. E. when up to the early 70s it was common, frequenting the hills on the shore. Now the greater number fly directly south from Newfoundland to West Indies on their way to winter quarters in southern S. A.;

north in May, passing through interior of N.A. Note, a single, mellow whistle. Flight, as in the last.

136. EUROPEAN GOLDEN PLOVER.

Differs from the last in having the axillaries and under wing coverts white. Northern Europe and Eastern Greenland.

137. KILLDEER.

A slender Plover, 10 long; tail, long, rounded; double black ring on neck. Ashy-brown above; lower back, rump, upper tail coverts and tail pale cinnamon, the latter tipped with white, preceded by a black band; band on wing, forehead, and under parts, white; eyelids, red; fig. 135. Young, a little more reddish above. Bill, black; feet, yellow in all stages. Downy young, with a single band on neck. Noisy, constantly crying, *killdee*, in loud and shrill tones as it flies. Flight, rapid, not direct for the bird twists and turns; wing-beats quick, but long and decided. Frequents moist places either on the coast or in the in-

terior, sometimes on the sea beaches or on bodies of fresh water. Often squats to hide when approached then rises suddenly with loud cries. Somewhat nocturnal, flying readily by night. Breeds throughout temperate N. A. but although it nests in Mass.,

Fig. 152



Little Blue Heron. 1-8.

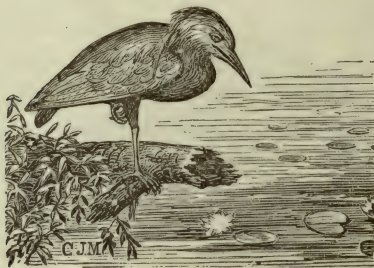
it is not common here at any time. Goes south in Oct. and Nov.; winters from N. C. (rarely from Mass.) south to northern S. A.; not common in the Bahamas and Greater Antilles; north in March and April.

138. SEMIPALMATED PLOVER.

Smaller, 7, and not as slender; single black ring completely surrounding neck,

paler brown above than last; lunette on forehead, outer tail feathers, tips of all but central pair, and beneath, white; bill, black orange at base; feet, yellow, fig. 136. Young, with black less bright and more buffy above. Breeds in Arctic and Sub-Arctic N. A.; south from middle July to middle Oct., when

Fig. 153



Black-crowned Night Heron. 1-6.

abundant on coast and somewhat common in suitable places in interior; winters from southern Fla. and Bahamas through the W. I. to Brazil. Occurs on beaches, sloughs, and mud flats. North in April and May when less common on Atlantic coast. Move in compact flocks but when feeding scatter

much, running about in all directions, keeping head well up. (These two latter named habits characterize all of the Plovers). Flight, swift and direct with rather long wing-beats. Call note, quite a plaintive whistle; also gives a single prolonged note when sitting.

139. RING PLOVER.

Differs from the last in having the ring much broader. Breeds in northern parts of Old World and on west shore of Cumberland Gulf in N. A.

140. PIPING PLOVER.

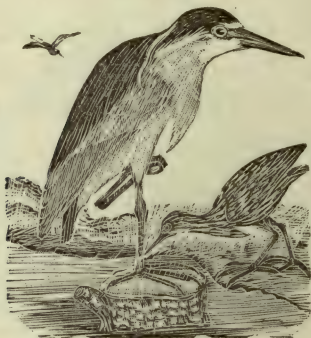
Palest of our Plovers, size of last, but differs in being yellowish brown above, in having no black on side of head, and the ring is represented by two spots, one on either side of neck, fig. 137. Young with often no trace of ring. Breeds from coast of Va., north to Newfoundland, in June, south in Sept., winters on the Fla. keys and in the Greater Antilles; north from middle April through May when it is rare on

Bahamas. Note, a long, sweet mournful whistle. Common but rare on the coast of Mass., north of Cape Ann in Summer.

141. BELTED PIPING PLOVER.

Differs from last in having the black band crossing the breast. Mississippi valley,

Fig. 154



Black-crowned Night Heron. 1-8.

breeding from northern Ill., north to Lake Winnipeg. Occasional on the Atlantic coast.

142. WILSON'S PLOVER.

Larger, 8, bill thicker and longer; sexes not similar. Male, with forehead, stripe

over eye and beneath, white. Fore part of crown, streak from bill to eye and continuous band on breast, black; above but little darker than Piping Plover, fig. 138. Female, with neck ring brown. Young, more reddish above. Breeds from Long Island southward through the Bahamas, W. I. and along the Gulf coast, in May; casual as far north as Nova Scotia in summer. Winters from the Fla. Keys, south, through the W. I. to S. A. Flight, rather heavy. Call note, a single short, but loud, whistle; during the breeding season utters a series of rattling notes.

143. MOUNTAIN PLOVER.

Larger, 8.50; similar in general color to the last, but the black on head is replaced by a more or less continuous tinging of brown. Breeds on the western plains from Kansas northward to Canada, in May. Occurs on dry plains and feeds chiefly on insects; goes south in late fall to winter in Southern Cal., Lower Cal., Tex. and Mex.;

accidental on Key West, Fla. Note, a pleasing whistle.

144. TURNSTONE.

Medium, 9.50, forehead, middle and lower back, wing band, upper tail coverts, tail and below, white; large patch on breast,

Fig. 155



Yellow-crowned Night Heron, adult and young. 1-8.

extending on side of head, V-shaped mark on rump, subterminal band on tail, black; above varied with black and red, fig. 140; winter, with less reddish above; young, wholly without it, but the black V on rump is always present. Breeds far north, comes south from Aug. to Oct. Winters, from N.

C. south through S. A. to the Straits of Magellan; goes north in April and May. Frequents sandy and stony beaches where it turns over small stones, seaweed, etc., in search of food, whence its name. Call, a clear, melodious whistle, consisting of two or three notes; also gives a chuckling sound. Flight, moderately swift and direct with strong wing-beats. Less common on our coast, north of N. C. in spring than in fall.

145. OYSTER-CATCHER.

Large, 19; above, head and neck blackish; patch on wing and beneath, white. Bill and eyelids, crimson; feet, pale pink, fig. 141. Young, marked with buff above. Breeds on the Atlantic coast from N. J. southward; formerly wintered from N. C. to Patagonia, now rare on our coast at this season, accidental north to Grand Menan. Frequents sandy shores and mud flats, feeding chiefly upon oysters. Flight slow but direct, with strong wing-beats. Alarm note when startled, a harsh discordant scream, but gives a

series of more mellow, yodeling cries. Now not very common in eastern U. S.

146. EUROPEAN OYSTER-CATCHER.

Differs from last in being smaller, 16, and the white of the upper tail coverts extended on to the lower-back. Europe, occasional in Greenland.

SPOONBILLS AND IBISES.

Large birds with long necks, bills and legs; wings, broad; tails, short. Aquatic, frequenting mud-flats and muddy shores of both salt and fresh water. Food, small crustaceans and fishes. Flight, direct and rapid with quick wing-beats, the neck is extended and the feet held straight out behind. Nests, placed in trees, composed of sticks. Social, often gathering in large flocks. Sexes, similar.

147. ROSEATE SPOONBILL.

Large, 30; bill, flattened and spoon-shaped. Rose pink, patch of crimson on lower neck in front, on wing, on upper and

lower tail coverts; naked head, green; bill, bluish; feet, pink, fig. 143. Young have head feathered, and color pale without crimson markings. Resident in southern Atlantic Gulf States. Bahamas and southward to

Fig. 156



Wood Ibis. 1-10.

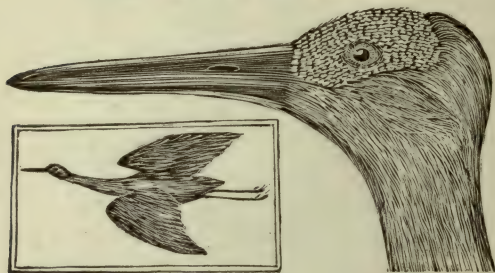
Patagonia. Eggs, ashy white spotted with brown.

148. WHITE IBIS.

Smaller, 24; bill, curved; white; tips of four outer primaries, black; bill, naked

space about head, and legs, yellow, fig. 142. Young, head, neck and above slate-brown; lower back, rump, upper tail coverts and beneath, white. Resident in Fla. and other Gulf States, Greater Antilles and northern S. A.; north in summer to N. C. and Ill., casually to L. I. and Conn.

Fig. 157



Sandhill Crane. 1-4.

149. SCARLET IBIS.

Larger, 29; scarlet throughout, tips of outer primaries, black. Young, brown; belly, white. Resident on eastern coast of Tropical America; accidental in Fla., La. and Tex.

150. GLOSSY IBIS.

Smaller, 23; head, neck, lesser wing coverts and beneath, dark chestnut; above metallic green, bronze and purple; space in front of eye, greenish; bill and feet, brown, fig. 144. Young, gray-brown, head and neck streaked with white. Warmer parts of Eastern Hemisphere; not uncommon in extreme southern portion of eastern U. S. wandering casually north to N. E. and Ill.

151. WHITE-FACED GLOSSY IBIS.

Differs from last in having a narrow line of white at base of bill. and space in front of eye, lake-red. Western U. S., south to the Argentine Republic; occasionally breeding in Fla.

Hérons.

Wading birds with long neck and legs and long, pointed bills; wings, broad; tail, short; flight, strong with comparatively slow wing-beats; the neck is doubled backward, but the legs are extended out behind. Food chiefly fishes, occasionally crustaceans,

frogs or even small mammals. Cries harsh. Young, at first naked, helpless and fed by regurgitation, but are soon covered with down, unless otherwise stated; nests are made of sticks and are placed in trees or bushes; eggs 3-5, greenish blue.

Fig. 158



Limpkin. 1-8.

152. AMERICAN BITTERN.

Large, 29, dark-brown streaked and spotted with yellow-buff; triangular patch on side of neck, black; bill and feet, greenish, fig. 145. Young, similar but paler. Nestlings covered with long yellowish down. Breeds throughout temperate N. A.; south

in Oct., winters from Fla. southward to Guatemala; north in April. Common, breeding habits solitary. Nests, placed on ground in inaccessible fresh water bogs or occasionally in salt marshes; eggs 3-6 green-ash or brown, when alarmed the bittern often squats in grass or will even enter water leaving the bill only exposed; at other times will stand motionless with neck perpendicular and bill pointing upward, then resembles a stake. Cries, when startled, harsh and sharp. In May and June the singular *punk-a-pog* notes are given. Flight, direct and rather swift with quick wing-beats.

153. LEAST BITTERN.

Small, 13; male; top of head, back and tail greenish black; sides of head, sides of neck, upper wing coverts, and beneath, yellow-buff, fig. 146. Female, with back brown. Bill and feet always yellow. Temperate N. A. breeding from Mass. (where it uncommon) to Fla.; winters from Fla. to Brazil. Eggs 3-4, pale greenish

154. CORY LEAST BITTERN.

Differs from last in being darker above and uniform reddish chestnut beneath. Rare, has been taken in Fla., Mich., Mass., Wis., O., N. Y., Toronto.

155. GREAT WHITE HERON.

Large, 47. Pure white; bill, yellow; feet, greenish. Occurs on low, mud-bordered

Fig. 159



King-Rail. 1-6.

Fla. Keys. Not common; rare in Fla. as far north as Ormond and Lake George. Flight, heavy with slow wing-beats.

156. WURDEMAN HERON.

Differs from last in being darker, ash above, in having streaks of black and rufous

on neck in front, bend of wing and tibia chestnut and top of head white, streaked with black. Resident on Fla. Keys; rare; possibly a color phase of last.

157. WARD HERON.

A little smaller than last, differs in having lower parts more broadly streaked with black, a large black patch on sides of breast, and the occiput with its plume and sides of head, black, leaving middle crown and forehead, white. Neck, yellow gray, fig. 147. Young, with top of head dull slate; neck, darker and back marked with reddish. Resident in Fla., breeding in March.

158. GREAT BLUE HERON.

Smaller, 45, bill smaller, usually has more black below. Breeds throughout entire N. A. from the Arctic southward, excepting at least middle and southern Fla., Bahamas and W. I. nesting in high trees; goes south from Sept. to Nov.; winters from N. C. to northern S. A.; occasionally as far north as Mass.; north in March and April.

159. EUROPEAN BLUE HERON.

Smaller, 37, with tibia and bend of wing, white. Northern portions of Eastern Hemisphere; accidental in southern Greenland.

160. WHITE HERON.

38; back with greatly elongated plumes, stiffened, with barbs separated; white throughout; fig. 148. Winter and young without plumes; bill, orange; feet, black. Breeds through temperate and tropical America, from N. J., Minn. and Ore. south to Patagonia; casual on Atlantic coast as far north as Nova Scotia. Now not common anywhere in U. S.

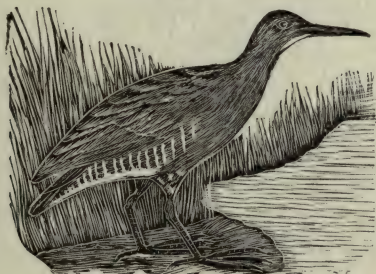
161. SNOWY EGRET.

Smaller, 24, head, breast with egret plumes which are more or less recurved at tips; white throughout, fig. 149; winter and young without plumes; bill and legs, black; feet and space at base of bill, orange. Temperate and tropical America from N. J. south to the Argentine Republic and Chili; casual as far north as Nova Scotia.

152. REDDISH EGRET.

Medium size, 30, back plumes present; head and neck, reddish; bill, black, purple at base; feet, black. Young, plain gray. Resident in southern Fla., chiefly on the extreme southern and western coasts, west along the Gulf coast to Texas and both

Fig. 160



Clapper Rail. 1-4.

coasts of Mexico and Guatemala; in summer wandering north to southern Ill.; recorded from Cuba and Jamaica; now rare in U. S.

163. CHANGING EGRET.

Differs from last in having the plumage irregularly mixed with white. Young,

similar but frequently without white mottlings. Not rare on west coast of Andros, Bahamas, casual in Fla.

Fig. 161



Sora. 1-3.

164. PEALE EGRET.

Differs from the two last in being white throughout in all stages. Resident in Fla.; chiefly the east coast, west along the Gulf coast to Texas, south to Honduras; Andros and Inagua, Bahamas.

165. LOUISIANA HERON.

Medium, 25; neck and bill long and slender. Head, neck and back plumes present; above, ash-blue; line down neck in front, reddish and white; beneath, white; bill, black, blue at base; feet, gray, fig. 151. In winter. bill and feet greenish, changing to yellow towards spring. Young, much tinged with reddish. Wing-beats, rapid. Solitary when not mating. Resident in Gulf States, Mex., C. A., Bahamas and W. I., casual northward to N. J. and Ind.

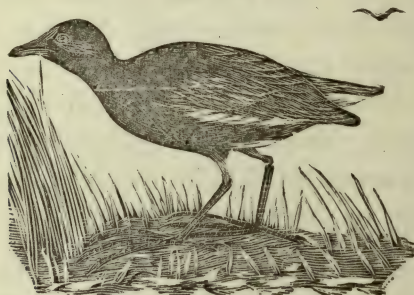
166. LITTLE BLUE HERON.

Smaller, 22; dark slaty blue; head and neck, maroon, fig. 152; this is the usual dress but specimens occur which have the plumage much mixed with white. Young, always white with the tips of primaries bluish at base, and feet greenish. Very agile; springs quickly into air to fly with rapid wing-beats. Eastern U. S., from N. J., Ill. and Kan. south to Bahamas, W. I. to northern S. A., casually north along coast to Mass. and Me.; winters, from N. C., south.

167. GREEN HERON.

Small, 17.50; above, greenish, looking dark in the distance; neck, chestnut-red, line down front black and white, beneath brown, bill and feet yellow, fig. 150. Young, mottled with reddish above. Agile running on

Fig. 162



Florida Gallinule. 1-5

ground and springing quickly into air and flying with rapid wing-beats. Note, a shrill cry often repeated several times. Common, frequenting swampy margins of rivers, ponds and lagoons. Nests in low trees and bushes. Breeds throughout temperate N. A. south to Key West Fla. and southern S. A. Winters, from N. C. southward.

168. BLACK-CROWNED NIGHT HERON.

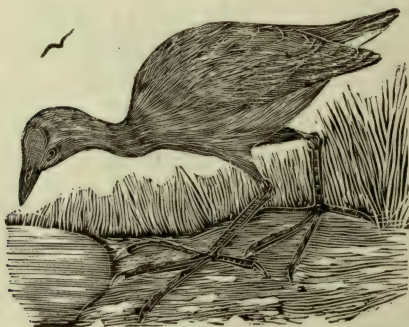
Larger, 26, and stouter; ash-white; top of head and back black; bill, dark; feet, yellow; slender plume on back of head, white. Young, brown, white streaked, figs. 153 and 154, small fig., young. Very common, breeding in large heronry. Flight and wing-beats, slow. Cry a harsh, abruptly given *qnack* uttered in flight and other guttural sounds best heard on the breeding grounds. Social at all time. Although nocturnal, frequently feed by day, especially in breeding season. Nests from March (Fla.) to June (northern N. E.)

169. YELLOW-CROWNED NIGHT
HERON.

Smaller than last, 23; bill, thicker; head and back plumed, darker above streaked with black especially on crown and sides of head. Young, darker brown, narrowly streaked with lighter. Cry, similar but not as harsh and is less seldom given. Often

feeds by day; a large portion of its food consists of crabs. Rather solitary but nests in small communities. Flight, rapid with rather quick wing-beats. America from N. C. and the lower Ohio Valley, south to Brazil and Peru, casually north to Mass., fig. 155.

Fig. 163



Purple Gallinule. 1-5.

STORKS.

Large birds with stout bodies, long necks, legs and bills, head and a portion of neck destitute of feathers. Young, helpless; sexes, similar.

170. WOOD IBIS.

Large, 43; bill, strongly curved; white, primaries tail, bill and legs, black; feet, yellow; naked head and upper neck, blackish covered with whitish scales. Young, head and neck feathered, dull brown throughout. Cries, harsh and discordant. Head, neck and legs outstretched in flight, fig. 156; wing-beats slow, frequently rises high in air to cricle about. Social, nesting in communities in high trees; nests composed of sticks; eggs, 1-2, chalky-white. Frequents ponds in swamps and pine woods, in summer; in winter more in thick swamps, southern U. S., north to the Ohio Valley, south to the Argentine Republic.

C R A N E S .

Our species differ from last in having hind toe elevated, thus cannot perch on trees; front of head only destitute of feathers. Nests placed on ground in fresh marshes, eggs 1-3, yellowish-brown. Young leave

nest early and follow parents. Not very social; sexes, similar.

171. SANDHILL CRANE.

Medium, 41; slaty-blue throughout, primaries brown, naked space in front of head lake; bill and feet, black, fig. 157. Young, somewhat yellowish above. Give loud, harsh gobbling cries. Sometimes dances with half-raised wings. Frequents ponds in pine woods. Shy and difficult to approach. Southern N. A.; rather common in unsettled portions of Fla.

172. LITTLE BROWN CRANE.

Smaller than last, 35. Northern N. A. from Alaska to Hudson Bay; accidental east of Mississippi.

173. WHOOPING CRANE.

Larger, 52; white, primaries, black. Young, yellowish, otherwise as in the Sandhill Crane. All the species have slow wing-beats and hold neck and legs outstretched, fig. 157, and sometimes soar high

in air. Interior of N. A. from the Fur Country to Fla., Tex., Mex. and from O. to Col. Not now found in Fla.

CRYING BIRDS.

Bill longer than head; neck and legs, long; wings of medium length but broad; tail, short. Color, dull. Sexes, similar.

Fig. 164



Coot.

174. LIMP KIN.

Length, 26, brown streaked very distinctly with white; throat, white; bill and feet, brown, fig. 158. Partly nocturnal, occurring on the borders of swamps. Cries, harsh and discordant; when alarmed gives chuckling notes, the head is jerked back and forward and the tail held erect; runs among bushes with swiftmess. — Food chiefly the animals of fresh water mollusks. Nests,

composed of sticks placed in bushes near water; eggs, 5-7, dull buff spotted with brown. Flight, heavy with slow wing-beats, the head outstretched and the feet dangling, fig. 158. Fla., Greater Antilles and Central America.

Fig. 165



Coot. 1-5.

RAILS, GALLINULES AND COOTS.

Medium size or small. legs long, bodies compressed and thin; wings short and rounded, all of the species run well but are poor flyers, moving in a straight line with rapid wing-beats and dangling legs; in alighting will drop from a little height upon

ground or water. Food, insects, aquatic animals and vegetable substance. Young, covered with down when hatched and active; black.

175. KING RAIL.

Large, 18; ash-red above, distinctly streaked with dark-brown, chestnut red on wing-coverts and beneath; flanks banded with white; throat, line from bill over eye, and abdomen, white; bill and feet, brown, fig. 159. Usually occurs on fresh-water marshes, but occasionally found on salt marshes. Breeds in May. Nests, placed on grounds, eggs, 5-7, buff spotted with brown. Cries, harsh and craking. Eastern U. S., north to the middle states; casually to Mass., Me. and Ontario.

176. VIRGINIA RAIL.

Similar to last in color but smaller, 10. Young, nearly black. Besides the harsh, rail-like craking, rapidly given, it utters a chuckling note when slightly alarmed and a

sharp squeak when much annoyed. The downy young keep up a constant peeping when running about in the marshes. N. A. from Canada south in early Oct.; winters from N. C. to Guatemala; north in early April.

177. CLAPPER RAIL

Differs from the King Rail in being smaller, 14, and in being overwashed with

Fig. 166



Merganser.

ashy above and below; streakings not as distinct, Notes fig. 160. The usual rail-like crake and a harsh scream when annoyed. Atlantic and Gulf coasts of the U. S. north to Conn.; casual in Mass.; resident from the Potomac southward. Breeds in March and April.

178. LOUISIANA CLAPPER RAIL.

Paler than last above, but more distinctly streaked, and red below deeper. Coast of Louisiana.

179. FLORIDA CLAPPER RAIL.

Bill more slender, much darker, nearly black above, ashy-gray below, mixed with cinnamon. Salt marshes of Western Fla.

180. SORA.

Smaller, 9, bill shorter than head; face and throat black; bill, yellow; feet, green; brownish-yellow above broadly streaked with brown, dotted and short-lined with white; breast and sides of neck, bluish; remaining under parts, white; sides and flanks banded with black. Young are overwashed with reddish below and black markings are absent. Notes not as rapid as with the Virginia Rail; gives a whistling cry like *cur-we* and some short chuckles. When a gun is discharged or a stone thrown into the water of the marsh that it inhabits, will

respond by giving explosive cries. Temperate N. A. breeding from the middle states northward; goes south in early Oct.; north in April, fig. 161.

181. SPOTTED CRAKE.

A little smaller than last, head neck and breast thickly spotted with white. Northern parts of Old World; occasional in Greenland.

Fig. 167



Merganser. 1-10.

182. YELLOW RAIL.

Small, 7; yellow-buff, broadly streaked on flanks with dark brown, secondaries white-tipped, conspicuous in flight. Occurs in marshes but sometimes in weedy upland fields.

183. BLACK RAIL.

Our smallest Rail, 5.50, very dark-brown above, spotted and transversely banded with white; back and neck chestnut-red; sides of head and under portions, blue-ash, banded on abdomen and under tail coverts with white. Breeds throughout temperate N. A., north to Mass., northern Ill. and Ore.; winters from Fla., south through the W. I. to Guatemala. South in Sept.; north in April. Very rare everywhere.

184. CORN CRAKE.

Larger, 10.50; dark-brown above, mottled with yellowish; upper and under tail coverts, rusty-red; beneath, blue-gray; flanks barred with reddish. Europe and northern Asia; casual in Greenland, Bermuda and eastern N. A.

GALLINULES.

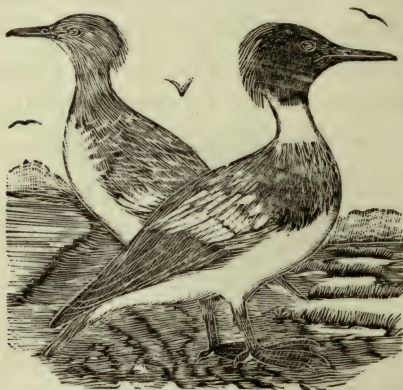
Rather larger, rail-like, but with stouter bodies; toes, long and narrow; bill, shorter than head with a frontal shield on fore-

head; sexes, similar. Inhabit borders of reed-margined streams or ponds.

185. FLORIDA GALLINULE.

14 long; bluish slate; back, bronzy, under tail coverts and streaks on flanks,

Fig. 168



Red-breasted Merganser. 1-10.

white; head, dusky; bill, yellow at tip remainder and frontal plate sealing-wax red; fig. 162. Young, duller with bill and frontal plate greenish. Rather social. Swims well and dives with ease; clings to aquatic vegeta-

tion beneath water; when swimming the feet are moved as in walking and the head is moved backwards and forward with them. Notes, a harsh, Rail-like *kea* repeated several times and given more often at night-fall and a metallic *chuck* when annoyed. Flight, direct with rapid wing-beats and dangling legs. Temperate and tropical America from Brazil and Chili north to Canada; rare in N. E. and middle States; resident in Fla., migratory further north.

186. PURPLE GALLINULE.

Smaller, 12.50; bright brown-green above; blue-purple beneath; sides, greenish; under tail coverts, white; bill, red tipped with yellow; frontal plate, larger and blue; fig. 163. Young, duller above, reddish mixed with white below. South Atlantic and Gulf States south through the W. I., Mex., C. A. and northern S. A.; rare or casual north to Me., N. Y. and Wis., migratory in the U. S., going south in Sept., north in May. Habits, similar to those of last.

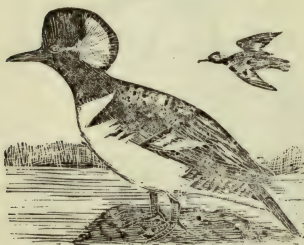
C O O T S .

Differs from Gallinules in having toes widely lobated, fig. 164.

187. COOT.

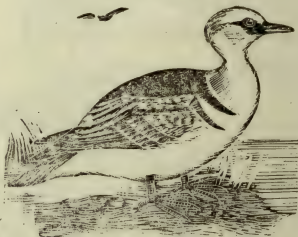
Larger than last, 16, differs from it in having bill white and white tips to secondaries, conspicuous in flight; fig. 165.

Fig. 169



Hooded Merganser. 1-8

Fig. 170



Smew. 1-8.

Young, duller with feathers more or less tipped with white. Notes, half melancholy whistles followed by a guttural chuckle. Flight, direct with rapid wing-beats with neck outstretched and legs held straight out behind; in raising from water, swims rapidly then runs with flapping wings, swims well,

but head is moved as in the last; dives but does not use wings under water. Breeds chiefly in northern U. S. and southern Canada; occurring more rarely north to Greenland and Alaska; goes south, largely through the interior (but occurring in immense, compact flocks at this season on fresh and brackish waters in Fla.); north in May when less common along Atlantic border.

188. EUROPEAN COOT.

Differs from last in having edge of wing and first primary white, and there is no white on under tail coverts. Northern Eastern Hemisphere; accidental in Greenland.

DUCKS, GEESE, AND SWANS.

Water birds which swim readily. They occur upon both salt and fresh water. Usually social, frequently assembling in large flocks. Sexes, dissimilar.

MERGANSERS.

Long-bodied, long-necked Ducks with slender bills, fig. 166. Males appear in the eclipse or female plumage in summer.

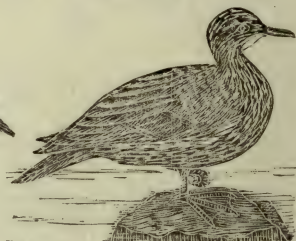
189. MERGANSER.

Large, 24; head upper neck and anterior back, black; remainder of back, ashy; white

Fig. 171



Fig. 172



Mallard. 1-12.

Black Duck. 1-2.

beneath, strongly tinged with salmon; bill and feet, orange. Large white wing-patch, fig. 167. Female and summer male; head and neck reddish with a well defined line of demarkation between it and the white beneath; throat, white; back, wholly ashy. Young, similar to female. Breeds from Pa.

northward; goes south in Sept. and Oct.; north in April. Winters, from the Middle States southward to the Gulf of Mexico. More scatteringly north to Mass. Common on fresh water; occasionally seen on salt water. Nests placed in holes of trees; eggs, 6-10 pale buff. Cry harsh, but duck like.

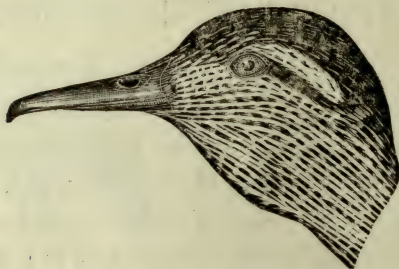
190. RED-BREASTED MERGANSER.

Smaller, 22, males with a well defined crest, breast and sides of neck, buff, streaked with black, creamy white beneath, fig. 168; female and summer and fall male, throat less white and red of head and neck not separated from white beneath by a well defined line of demarkation. Young, similar but duller. Nests, on ground; eggs, 6-10, greenish-brown. Breeds chiefly north of the U. S.: winters from N. E. to Fla. when it occur off our coast in flocks of thousands which sit on the water in compact masses or rise and fly about in a disorderly manner; south in Oct., north in April.

191. HOODED MERGANSER.

Smaller, 19, head prominently crested; male, head, neck and collar on lower neck, black; patch on head and crest, streaking above; patch on wing and beneath, white; sides chestnut, finely banded with black; bill, black; feet, dusky-orange, fig. 169.

Fig. 173



Red-legged Black Duck. 1-2.

Female and young brown on head, neck and back; white beneath. Occurs more often on fresh than salt water; sits low when swimming and does not associate in large flocks; is apt to turn quickly about on water and back again. Nests in cavities of trees; eggs, 6-10, white. N. A. south to Mexico and

Cuba, breeding throughout most of its range; resident from N. C. southward.

192. SMEW.

Smaller, 17; patch in front of eye, back and two crescent-shaped bars on side of breast, black; otherwise, white. Female, top of head, brown, rest of head and beneath, white; back, pale brown. Northern Europe and Asia; accidental in eastern N. A.

RIVER DUCKS.

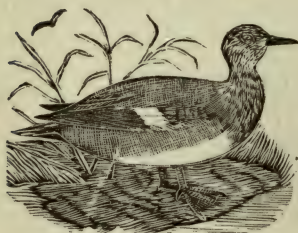
Bill, wide and flattened; legs, short, but the birds walk well and often feed on land. Terminal portion of inner secondaries, iridescent, forming a shining surface, the speculum. Do not dive but reach down into shallow water sometimes tipping the body forward. Nests, on ground; eggs, 6-12, greenish.

193. MALLARD.

Large, 24; head and neck, green; lower neck in front and breast. chestnut; lower neck behind and back, reddish-brown, finely

banded with white, but becoming black on upper tail coverts, the tips of which are upturned; beneath, back of breast, creamy-white. Speculum, dark blue bordered by black, which is margined before and behind with white; bill, greenish; feet, orange. Female and young, dark-brown, banded and

Fig. 174



Gadwall. 1-12.

Fig. 175



Baldpate. 1-12.

spotted with yellowish red; speculum as in male. Northern parts of Northern Hemisphere; in N. A. breeding south to southern U. S.; most common in northeastern U. S. during migration in April, Sept. and Oct., a few remain all winter as far north as Mass. but the greater portion winter in the south. In starting from water, rises obliquely.

Easily tamed and is the origin of many of our domestic ducks, fig. 171.

194. BLACK DUCK.

A little smaller, 23; dark brown streaked with reddish-yellow; speculum, green, bordered by black only; fig. 172. Female and young rather more yellowish; in all stages the throat is yellowish with few or no spots; feet, brownish; bill, green. In rising from water springs into air nearly perpendicularly to the height of ten feet before darting away in swift flight. More often occurs on fresh than salt water. Breeds from Mass. northward, most abundant during migration, in April and Sept. Winters from Mass. to S. C.

195. RED-LEGGED BLACK DUCK.

Larger than last, darker; throat, thickly spotted, fig. 173; bill, yellow; feet, red. Breeds north of U. S.; goes south in Oct. to winter in great numbers from Mass. to the Chesapeake; north in April. Occurs more often on salt water than on fresh; sometimes

congregating along the coast in flocks of hundreds.

196. FLORIDA BLACK DUCK.

Smaller, much more yellowish than Black Duck and more broadly streaked; bill,

Fig. 176



Green-wing Teal. 1-8.

Fig. 177



Blue-winged Teal. 1-8.

greenish; feet, reddish-orange. Central and southern Fla. Not seen in large flocks.

197. GADWALL.

Smaller, 21; speculum, white bordered in front with black, grayish above, reddish on top of head; bill, black; feet, greenish, fig. 174. Female, brown throughout, speculum as in male. Nearly cosmopolitan; in N. A. breeds in western U. S. where com-

mon; rare on Atlantic coast. Goes south in Nov. to winter in Central America, north in May. Nests, on ground; eggs, 6-10, pale brown-buff.

198. BALDPATE.

Size of last; speculum, black; top of head. white; grayish above, breast and sides ashy-red; dark stripe behind eye. fig. 175. Female, duller, crown spotted with dusky. Breeds in interior of N. A., chiefly north of U. S. Winters from southern border of U. S. to Central America; south in Sept. and Oct., north in April; rather rare on Atlantic border north of Fla. Frequent fresh and brakish waters.

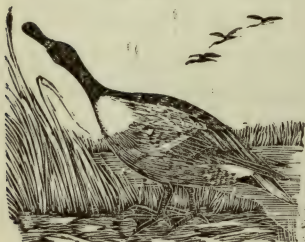
199. WIDGEON.

Differs from last in having crown yellowish and remainder of head and neck chestnut-red. Female, speculum, gray bordered with white, excepting below. Northern parts of Old World; occurs frequently in eastern U. S.

200. GREEN-WINGED TEAL.

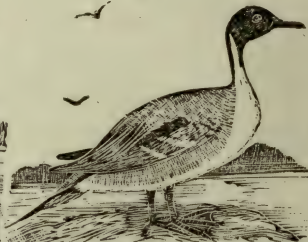
Small, 16; speculum, green above, black below, narrowly bordered by white behind; head and neck, chestnut-red, green patch behind eye; grayish brown above; crescent shaped mark in front of wing, ring around neck and beneath, white; breast

Fig. 178



Shoveller. 1-10.

Fig. 179.



Pin Tail. 1-10.

purplish with rounded spots of black; bill and feet, brown, fig. 176. Female, brown above, white beneath, slightly spotted with dusky on breast; young similar to female with all stages occurring between this dress and that of adult male, speculum always as in male. Breeds chiefly north of U. S.,

winters along southern border of U. S. southward, goes south in Sept. and Oct., comes north in March and April. On Atlantic border occurs more frequently on salt than fresh water. Nests on ground, eggs, 6-10, pale buff.

201. EUROPEAN TEAL.

Differs from last chiefly in absence of white crescent in front of wing and in having a whitish border to green patch on head. Female and young, scarcely different from last.

202. BLUE-WINGED TEAL.

Larger than Green-winged, 16; patch on wing, blue, speculum, black bordered with white behind. Head and neck gray; white crescent in front of eye; top of head, black; back, brown; outer webs of scapularies, blue, black and green; beneath, pale purplish spotted with black; bill, black; feet, yellow, fig. 177. Female, brown marked with white; wings as in male. Young, similar to female with intermediate stages in males.

Breeds chiefly in the interior of N. A. from Kan. and southern Ill., north to the Saskatchewan; winters from N. C. south to northern S. A.; south in Sept., north in April. Frequents small ponds or even pools usually of fresh or brackish water, but occasionally

Fig. 180



Wood Duck. 1-9.

is found on salt water creeks. When alarmed and in flocks on water gathers into a compact mass. Flight exceedingly swift.

203. CINNAMON TEAL.

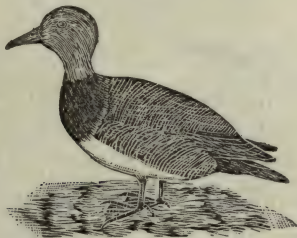
Differs from last in having speculum green, head, neck and lower parts rich purplish chestnut and feet orange. Female

differs in being more heavily marked with darker. Western America; in N. A. west of the Rocky Mountains; rare east of the Mississippi River.

204. SHOVELLER.

Larger, 20; bill greatly widened at tip; speculum, violet-green, blue patch on wing

Fig. 181



Redhead. 1-15.

as in last; head and neck, dark-green; breast, sides of back and wing-band, white; belly, chestnut; bill, black; feet, orange, fig. 178. Female, mottled and streaked with pale brown, dark brown and black; wing like male. Young male with intermediate plumage. Northern Hemisphere; in N. A., breeds

from Tex. to Alaska. Winters, commonly from N. C. through Gulf States; south in Sept. and Oct., north in April. Uncommon in Atlantic coast states north of N. C. Occurs in small ponds both salt and fresh in small flocks. Nests, on ground; eggs, 6-10, greenish. Note of male, a short, guttural *thuck*; female, *quack*.

205. PINTAIL.

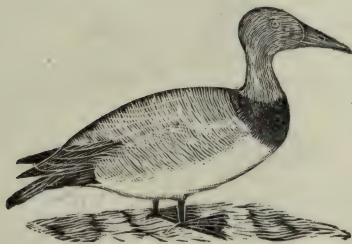
Larger, 25, neck, long and thin; central tail feathers, long, narrow, bill not widened at tip; speculum, violet-green; head, neck and back, brown; two lines of white extend down sides of neck with a patch of black between and join the of lower parts; wing coverts ashy, greater tipped with reddish; bill blue, line on top black, feet bluish, fig. 179. Female, speculum gray; dark-brown above marked with lighter; yellowish-white beneath; white wing-band in both sexes. Northern Hemisphere, in N. A. breeds north of U. S.; south in Sept.-Nov. to winter from Gulf States to Pamama, when

very abundant in Fla., frequenting salt estuaries of coast and fresh waters of interior; north in March. Not common on Atlantic coast, north of Ga. Male, whistles; female, quacks.

206. WOOD DUCK.

Our most beautiful species, 18; head, crested, green; line over eye, one behind it,

Fig. 182

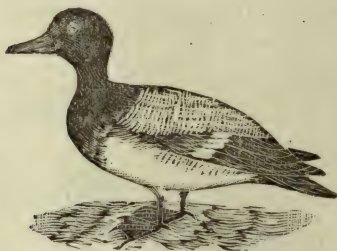


Canvasback. 1-16.

triangular throat patch, ring around neck and belly white; breast, chestnut; back, brown; sides buff finely banded with black with coarser black and white bandings on flanks; iris, red; bill, pink; feet brown, fig. 180. Female, young, and eclipse plumage of

adult male (occurring in mid-summer) duller; head, brown; line at base of bill and space about eye, white, this being larger in adult males; breast, streaked. Breeds throughout temperate N. A., south in Oct.; winters in Gulf States; north in April. Nests, placed

Fig. 183



Lesser Scaup. 1-10.

in holes of trees; eggs, 6-10, pale brown. Frequents wooded streams and small ponds often hiding in thickets; rises suddenly and flies swiftly away usually following the stream. Breeding note, given by both sexes, a clear, long-drawn, plaintive whistle, repeated rapidly.

SEA DUCKS.

Sea-inhabiting in winter, but some species breed in the interior. All dive well.

207. RUFOUS-CRESTED DUCK.

Of medium size, 21; head, conspicuously crested; speculum, white; head and neck, reddish; back, brown; below and rump,

Fig. 184



Scaup, ♀. 1-3.

black; large patch on flanks, white; bill and feet, bright red. Female, brown; speculum, gray; crest, small. Eastern Hemisphere; accidental in eastern U. S.

208. REDHEAD.

A little smaller, 20; bill, low at base and not projected back on forehead; spec-

culum, gray, black margined above; head and upper half of neck, brown-red; remainder of neck and body in front of wings, and lower back, black; canvassing on back and sides, dark; feet, bluish. fig. 181. Female, brown with canvassing of back showing faintly. Breeds from northern Mich. and northern Me., northward; south, in Oct. to winter from Mass. (where it is rare north of Cape Cod) southward of Fla.; common in the middle sections of winter range; north in April. Nests, on ground; eggs, 8-12, brownish.

209. CANVASBACK.

Differs from last in having a longer bill, higher at base, and back much whiter, fig. 182. Breeds from northwestern states, northward, migration, winter range, and nesting habits similar to last.

210. SCAUP.

Smaller, 19; speculum, white; head, neck and upper breast, black, the former glossed with green and violet; back, sides

and beneath, appearing white, fig. 183. Female with black of male replaced with brown, white space at base of upper mandible; bill, blue; feet, black, fig. 184. Young male similar with intermediate stages. Breeds from northern North Dakota, northward through northwestern N. A.; south in

Fig. 185



Golden-eye. 1-10.

Oct.; north in April. Winters from Mass. south to Ga., usually found on salt water, often in large close flock or rafts and in rising flies in a close body. Nesting habits and eggs, similar to last.

211. LESSER SCAUP.

Smaller than last, 17, head without greenish gloss. Breeds a little further,

south and more in the interior of Canada away from coast; south in Oct. to winter from N. C. south to W. I., north in April,

212. RING-NECKED DUCK.

Differs from last in having speculum gray, a distinct reddish ring around neck,

Fig: 186



Barrow Golden-eye. 1-8.

and a black bill. Breeding, winter range and time of migration similar. Occurs singly or in small flocks on fresh or brackish waters.

213. GOLDEN-EYE.

Larger, 20; head, upper neck and back, black; lower neck, under parts, and wing

patch white; bill, black; feet, yellow, fig. 185. Female and young male, black, replaced by brown with intermediate stages. Breeds from northern U. S., northward to tree limit; south in Oct. to winter from Mass. to S. C.; north in April. Place snest in cavity trees; eggs, 8-10, ashy-green.

Fig. 187



Buffle-head. 1-10.

214. BARROW GOLDEN-EYE.

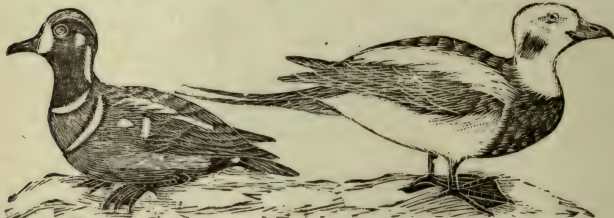
Differs from last in having bill higher at base and the white spot at its base more triangular, fig, 186. Breeds from northern U. S. northward; uncommon in northern U. S. in winter; south in Oct.; north in April. Nesting habits and eggs similar to last.

215. BUFFLE-HEAD.

Small, 14; feathers of head elongated; head and back, black; triangular patch, back of eye, broad line through wing and beneath, white; fig. 187. Female, brown above, white below; white patch on wing and a small one back of eye and below it.

Fig. 188

Fig. 189



Harlequin. 1-15.

Old Squaw. 1-15.

Breeds chiefly north of the U. S.; south in Oct. to winter from Mass. to Fla.; north in March.

216. OLD SQUAW.

18, neck short; central tail feathers elongated and narrow; summer, head, neck, breast, upper parts and middle tail, black; sides of head and body, ashy; patch behind

eye, longitudinal streak on side of occiput, under parts and side of tail, white; bill, black; feet, bluish. Winter differs in having head, neck, upper breast and back, white; patch of brown on side of head below one of ashy, fig. 189. Female differs in lacking long central tail feathers; head and neck,

Fig. 191



Northern Eider. 1-3.

Fig. 190



American Eider. 1-3.

dusky with whitish patch around eye and on neck behind. Breeds in the Arctic, south in Oct., wintering from coast of N. E. to S. C.; north in late April. Frequents bays along coast in close flocks from a few pairs to hundreds. In feeding all of the flock are apt to dive at one time and reappear simultaneously; sometimes rise in air and by

circling about to a considerable hight. Cries musical and frequently given both when on the water and in flight, they are: *Er-lit ah-er-lit*, varied by *Ah-ah oh-er-lit*. Nests placed on ground; eggs, 7-12, ashy.

217. LABRADOR DUCK.

Shorter, 19; head, breast and large wing patch, white; top of head, collar, around

Fig. 192



King Eider. 1-3.

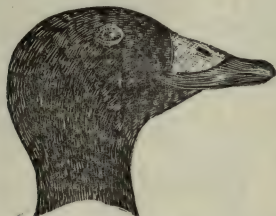
neck and body, black; bill, black, orange at base; feet, bluish. Female, ash-brown; wing-coverts and secondaries, white. Former breeding range, north of the U. S.; in winter as far south as N. J. Now extinct; last specimen captured was at Grand Menan, N.

B., in 1871, but I saw one living in the mouth of Ipswich River in 1872.

218. HARLEQUIN DUCK.

Smaller, 17, appearing black; triangle in front of eye, spot on back of head, two crescents on sides, and markings on back, white, fig. 188. Female, ash-brown; face

Fig. 193



Scoter. 1-3.

and spot on sides of occiput, white. Breeds in N. A. from Newfoundland northward chiefly in interior, placing nests in holes of trees, stumps, etc.; eggs, 6-8, pale-brown. Winters, from Gulf of St. Lawrence to N. J., but uncommon from Mass. southward. South in Nov.; north in Feb.

219. AMERICAN EIDER.

Large, 25; head, neck and above, white; forehead, line through eye and beneath, black; portion of head, pale green; naked space at base of bill, white, fig. 190. Female, reddish-brown, transversely banded with dark-brown. Breeds of Atlantic coast from

Fig. 194



Surf Scoter. 1.10.

Fig. 195



White winged Scoter, 1.10.

Me. to Labrador, south in late Oct. to winter from Mass. to Del.; on coast of Mass. keeps well out to sea feeding about remote islands.

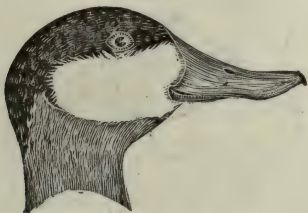
220. NORTHERN EIDER.

Differs from last in having naked space at base of bill narrow, fig. 191. Breeds in north-eastern N. A. and Greenland, south in winter to Mass.

221. KING EIDER.

Size of last, differs from it in having base of bill considerably swollen and naked process widened; black of head reduced to a narrow line about process and there is a V of black on throat, fig. 192. Female differs in having swollen process at base of bill.

Fig. 196



Ruddy Duck. 1-2.

Breeds in the Arctic, south in winter as far as northern N. E. and rarely to Ga.

222. STELLER DUCK.

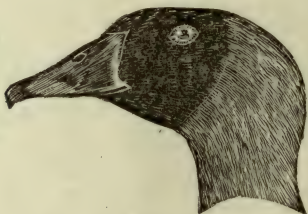
Smaller, 15; greater portion of head, patch on wing and breast, white, remainder of plumage appearing black. Female, head, neck and breast, brown the last barred and spotted with black; head and neck, light

brown; elsewhere appearing black. Breeds on Arctic coast of Siberia; winters on coast of Alaska. Accidental in Greenland and Quebec.

223. SCOTER.

19; base of bill, slightly swollen and orange; wholly black, fig. 193. Female,

Fig. 197



Masked Duck. 1-2.

brown whitish on sides of head. Breeds in Labrador and northward; south in Oct. to winter from N. E. to Fla.; north in April.

224. WHITE-WINGED SCOTER.

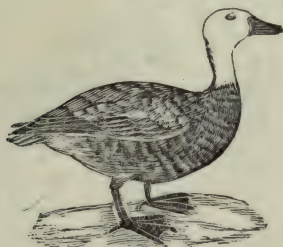
Larger, 21; base of bill, swollen; black with small spot beneath eye and patch on wing, white, fig. 195. Female, differs from last in having white patch on wing. Breeds

north of U. S. in Canada; winters, from N. E. to S. C.; time of migration as in last. Nests placed on ground; eggs, 5-8, pale brown.

225. VELVET SCOTER.

So similar the last as to be indistinguishable in field. Northern Old World, accidental in Greenland.

Fig. 198



Blue Goose. 1-6.

226. SURF SCOTER.

Bill considerably swollen at base and brightly colored. Black, with spot on front of head and another on occiput white, fig. 194. Female, brown with light spot at base of bill and on side of head. Breeding

range and migration similar to last.. In swimming all Scoters frequently hold tail upright, as does the Ruddy Duck. They often associate together in great flocks; when a small number are together they fly in line one behind the other close to the water, but when in large flocks will some-

Fig. 199



Lesser Snow Goose. 1-18.

times fly higher and in a more confused manner; all are apt to fly into the mouths of estuaries at low tide to feed upon mussels.

227. RUDDY DUCK.

Smaller, 15; neck and upper parts, chestnut. Top of head, black, spot on its

side, white; beneath, grayish; bill and feet, bluish, fig. 196. Female and winter male, chestnut replaced by reddish-brown; throat, lighter. Breeds locally throughout N. A. south to Guatemala; south in Oct. to winter from N. C. to the W. I.; north in April. Occurs singly or in small flocks on both

Fig. 200



American White-fronted Goose. 1-4.

fresh and salt water, but seldom on the ocean, often in small ponds and pools. Very unsuspicious. Often holds tail erect when swimming. Dives well. When startled flies swiftly, but is apt to circle and return to the place from which it started. Nests placed on ground; eggs, 6-10, dull white.

228. MASKED DUCK.

Smaller, 13; front of head, black; body, reddish brown, lighter beneath; white wing patch, fig. 197. Female, duller; top of head and two stripes on its side, black. Tropical America, accidental in Wis. N. Y. and Mass.

Fig. 201



Canada Goose. 1-4.

G E E S E .

Large with long necks, quite long legs well fitted for walking. Bill, short and high at base. Sexes, similar; nests on ground; eggs, 6-10, dirty white or yellowish.

229. BLUE GOOSE.

Large, 28; appearing brown; head and neck, white, fig. 198. Young, dark all over. Breeds on eastern shore of Hudson Bay; goes

south through interior to winter on coast of Gulf of Mexico, west of La.; rare on Atlantic coast.

230. LESSER SNOW GOOSE.

Smaller, 25; white; primaries, black, fig. 199. Young, appearing dark brown. Breeds in Alaska, south in Oct. and Nov. to

Fig. 202



Barnacle Goose. 1-4.

winter to southern Ill. and southern Cal.; casual in N. E. Flight and cries much as in Brant.

231. GREATER SNOW GOOSE.

Differs from above in being larger, 35. Breeds on eastern coast of Hudson Bay; south in winter, very rarely to N. E. and southward as far as Cuba. Rare in U. S.

232. AMERICAN WHITE-FRONTED GOOSE.

Smaller, 30; gray above, forehead and beneath white mottled with black on breast, fig. 200. Breeds far north in N. A.; goes

Fig. 203



Brant. 1-4

south in Oct. to winter in the south west; north in March; rare in Atlantic coast.

233. WHITE-FRONTED GOOSE.

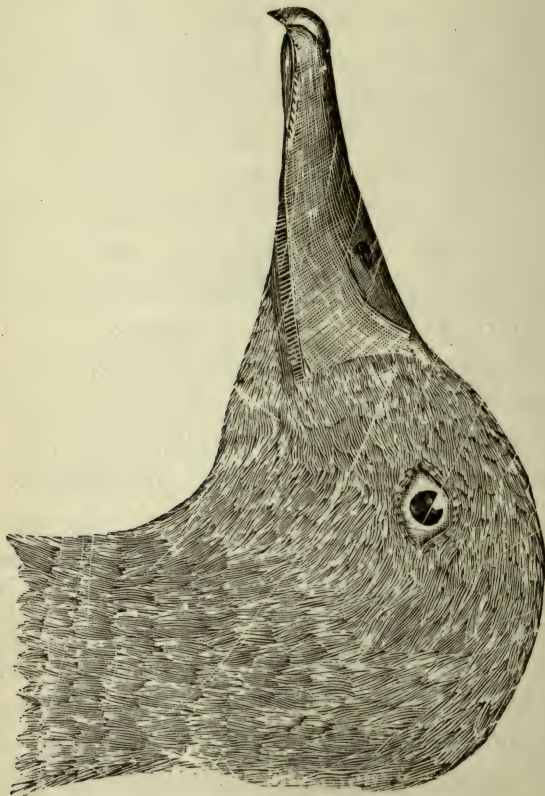
Smaller, with a considerably smaller bill. Northern parts of Eastern Hemisphere; accidental in Greenland.

235. CANADA GOOSE.

Larger, 40; brown above and on head and neck; patch on cheeks usually meeting on throat, and beneath white; head and neck, black, fig. 201. Breeds in northern U. S. and Canada; south in Nov. to winter from Md. to Fla. and Mex.; north in March. Flight rather rapid but with slow wingbeats; moves in lines or Vs but never masses in front. Cries loud and sonorous.

The Canada Goose is frequently domesticated and breeds readily if kept in sufficiently large enclosures. In order to keep it from migrating, however, after the first year one wing should be clipped. It associates with the common domesticated Geese and the ganders sometimes take charge of their young, but it does not appear to hybridize with other geese. The cries, given continuously in flight, as a call to keep members of the flock to straggling; are also uttered when the birds are on the ground.

Fig. 204



Fulvous Tree Duck.

236. HUTCHINGS GOOSE.

Much smaller than last, 32; otherwise similar. Breeds in Arctic N. A.; south in Oct. through western U. S. and Mississippi Valley to winter from Kansas southward; north in March.

237. CACKLING GOOSE.

Smaller, 24; distinct white collar on lower neck; nearly as dark below as above. Breeds on northern Pacific coast; south in winter into western U. S.; rarely east to Wis.

238. BARNACLE GOOSE.

26; fore part of head and beneath, white; back of head, neck and breast, black, fig. 202. Northern parts of Old World; casual in eastern N. A.

239. BRANT.

25; no white on head, but streaked with it in patch on side of neck; gray above; white beneath, fig. 203. Breeds in Arctic, in N. A., chiefly on Atlantic coast; south in

Oct. and Nov. to winter in southern U. S.; north in April, occurs chiefly on coast over

Fig. 205



Flamingo. 1-16.

the sea seldom crossing land. Flight, swift; wing-beats, rather rapid; moves in lines, but frequently breaks into irregular masses

in front. Cries more shrill and less sonorous than in Canada Goose.

240. BLACK BRANT.

Differs from last in having white of neck clear and meeting beneath. Breeds in Arctic N. A.; south through West to winter as far as lower Cal.; casual on Atlantic coast.

Fig. 206



Bobwhite. ♂. 1-10.

241. FULVOUS TREE DUCK.

21; head neck and beneath light cinnamon; back and bill, black; fig. 204.

SWANS.

Large birds with neck longer than body; swim with ease and have power of

elevating the enlarged secondaries as sails; fly with great swiftness, when migrating moving high in air often in V-shaped flocks; cries, loud and harsh. Nests on ground, eggs, 3-5.

242. WHOOPING SWAN.

60; white, basal portion of bill, including nostrils, yellow. Northern Eastern Hemisphere; occasional in southern Greenland.

243. WHISTLEING SWAN.

A little smaller than last, and has only a small spot of yellow at base of bill. Breeds far north, winters from Md. to Gulf of Mex.; very rare on Atlantic coast, north of Md.

244. TRUMPETER SWAN.

Larger, 65; bill wholly black. Breeds in interior of N. A. from Iowa northward; casual on Atlantic coast.

FLAMINGOES.

Large birds with long necks and legs, with feet and bill abruptly bent in middle.

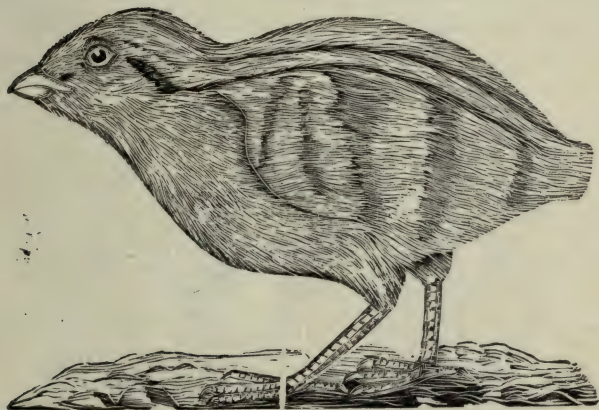
Frequent islands and sea coasts in tropics or sub-tropics.

245. AMERICAN FLAMINGO.

Large, 45; scarlet; primaries, black, fig.

205. Breeds from Bahamas south through

Fig. 207



Bobwhite, young.

Atlantic coast of tropical America. Flight, rapid with rather slow wing-beats and with outstretched neck and legs. Nests built of marl piled in form of truncated pyramid.

Eggs, 1 or more rarely 2, greenish but covered with chalky incrustation. Food, small mollusks. Cries, sonorous and goose-like.

LAND BIRDS.

Birds which live on land and which, with a few exceptions, do not procure their

Fig. 208



Canada Grouse. 1-12.

food from water. While the young of most of the species are hatched naked and helpless, a few, as in the first group given, are covered with down and are active as soon as they leave the egg. Not migratory.

GROUSE, QUAIL, ETC.

Of varying sizes; young active when hatched, covered with down and capable of feeding themselves. All species run rapidly, often hiding when alarmed to rise suddenly with a whirl of wings when approached closely. Nests, placed on ground; eggs, many. Flight, rapid, direct with very quick wing-breast.

246. BOBWHITE.

Small, 10, chestnut-brown above; throat, line over eye and beneath, white; streaked on upper breast and sides with chestnut; patch on side of neck extending to bill, black, fig. 206. Female has throat buff. Downy young, buff streaked with dark-brown, fig. 207; unable to fly until well grown. Notes, *Bob-white* or *More-wet*; sometimes, *No more-wet*, also a chuckling when disturbed, and a call when the bevy is separated. Eastern U. S. from southern Me. to Fla. Eggs, white.

247. FLORIDA BOBWHITE.

Smaller, darker, with black of breast considerably extended. Florida.

248. CANADA GROUSE.

Larger, 15, black, blotched and banded below with white; terminal band on tail,

Fig. 209



Ruffed Grouse. 1-12.

chestnut, fig. 208. Female, duller with much of black replaced by chestnut, especially on breast. Young, much more reddish. Canada, east of Rocky Mountains south to northern Minn., Mich., N. Y. and N. E. Very unsuspicious birds inhabiting coniferous forests.

249. RUFFED GROUSE.

Larger, 18; tail long and, when spread, fan-like; reddish brown above banded and mottled with darker; white below marked with brown especially on breast; tail with subterminal band of black, fig. 209. Female, duller with a smaller tail. Downy young, reddish buff lined, mottled, and spotted with brown, fig. 210; can fly when about a week old. Eastern U. S. south along the mountains to northern Ga. Frequents bushy woodlands. Note, a whistling chuckle when alarmed. Drums in spring, summer and autumn; this begins loud and distinct, increases in rapidity, but diminishes in volume until it dies away.

250. CANADIAN RUFFED GROUSE.

Differs from last in being grayer, especially on tail. Spruce forests of northern N. E., northern N. Y., north to James Bay.

251. THAYER RUFFED GROUSE.

Differs from last in being darker above and in having the under parts more heavily

Fig. 210



Ruffed Grouse, young.

banded. Nova Scotia, and possibly also New Brunswick. Habits, etc., similar to last.

252. WILLOW PTARMIGAN.

15; winter, white; tail, black, fig. 211. Summer, reddish-brown spotted and banded with black; greater portion of wing, middle under parts, and feet white, fig. 212. Arctic

Fig. 211



Willow Ptarmigan, winter. 1-8.

and Sub-arctic, in N. A. south to Sitka and British Provinces, accidental Me. and Mass.

253. ALLEN PTARMIGAN.

Similar to last, primaries more or less mottled with dusky. Newfoundland.

254. ROCK PTARMIGAN.

Scarcely different from 253 in winter; in summer, grayer above and more coarsely

banded with black above, markings below darker.

255. REINHARDT PTARMIGAN.

Differs from last in summer in being even more coarsely banded above where the black predominates. Greenland, western shores of Cumberland Gulf, and northern Labrador.

Fig. 212



Willow Ptarmigan, summer. 1-8.

256. WELCH PTARMIGAN.

Differs from Allen Ptarmigan in being much darker above in summer and with more dark bandings elsewhere. Newfoundland.

257. PRAIRIE HEN.

Large, 18; head, crested, elongated plumes on neck; light brown above, white

beneath, banded with black, fig. 213. Prairies of Mich. and Westward.

258. HEATH HEN.

Differs from last in having brown bandings broadened and feathers of neck tufts pointed. Martha's Vineyard, Mass.

Fig. 213



Prairie Hen. 1-8.

259. PRAIRIE SHARP-TAILED GROUSE.

Differs from above in absence of neck tufts and in having large rounded white markings on wings, and in being tinged with rusty above; white beneath with V shaped marks of black. Great Plains of U. S. east to Wis. and northern Ill.

P I G E O N S .

Birds of varying size, long wings and well-developed tails; bills weak. Flight, rapid, direct, with quick wing-beats. Stick-built nests often placed in trees in our species, but sometimes on ground; eggs, 2, white. Young hatched naked and very helpless fed by regurgitation. Food, vegetable substances.

260. WHITE-CROWNED PIGEON.

About the size of domestic pigeon; 13; dark slate-blue; top of head, white. Bahamas and some of West Indias; rather uncommon on Fla. Keys. Notes, given in minor key, *wof*, *wof wo*, *co-woo*, the first three repeated several times, the last long drawn out. Social, occurring in flocks and breeding in communities.

261. PASSENGER PIGEON.

Large, 16.50; tail, long and pointed; upper parts, sides, neck and head, ash-blue; beneath, purplish-red, under tail coverts

and tip of tail, white; sides and back of neck, iridescent. Formerly ranged through eastern N. A. from Hudson Bay southward, now probably extinct.

Fig. 214



Passenger Pigeon. 1-8.

262. MOURNING DOVE.

Differs from last in being smaller, 12, more brownish-red and in having tail more broadly tipped with white and crossed by a black band above this, fig. 215. N. A. from southern Me. and Canada south to Panama; not common in the Bahamas; local

in distribution. Social when not breeding. Note, a mournful double coo.

263. ZANAIDA DOVE.

Tail not pointed, but short and rounded, yellow-brown, a narrow white wing-band,

Fig. 215



Mourning Dove.

small black spot on neck where there is an irridiscent patch. Common on Bahamas and in some of the West Indias, rare on the Fla. Keys. Not social, lives mostly on ground. Coo of two notes, the first uttered with a falling inflection, the second fol-

lows quickly, but is not prolonged, then comes, *who, who, who*, with a decided pause between the first two, all are loud, but in a minor key.

264. GROUND DOVE.

Small, 7, slate-brown above, under portion of wing, seen in flight, chestnut, purple-

Fig. 216



Ground Dove.

red on breast; bill, orange, black at tip, fig. 216. Female, duller. South Atlantic and Gulf States. Note, *who*, often repeated in a minor tone. Ordinary flight, especially in thickets, which it frequents, flitting, but when passing over wider spaces more direct and rapid.

265. BAHAMA GROUND DOVE.

A little smaller than last, paler; bill, nearly black. Bahamas; accidental in Fla.

266. KEY WEST QUAIL DOVE.

11; dull chestnut, purplish red beneath glossy above with metallic purple and bronze; broad white stripe on side of jaw. Bahamas and some of the W. I.; casual in summer on Fla. Keys. Keeps hidden in scrub most of time. Nests placed on top of air plants, in trees.

267. RUDDY QUAIL DOVE.

Differs from last in being without metallic luster above and the white jaw stripe is less conspicuous, being somewhat buffy. Tropical America; accidental on Key West, Fla.

268. BLUE-HEADED PARTRIDGE
DOVE.

A little larger, 12, dark brown above, more reddish beneath; head, black; crown, blue; line on side of head beneath eye and one bordering throat, white. Cuba, casual on Fla. Keys.

269. WHITE-WINGED DOVE.

A little smaller than last; grayish-brown, conspicuous white patch and bar on wing. Female, duller. Western U. S.; accidental on Key West, Fla.

Fig. 217



Turkey Vulture. 1-12.

T U R K E Y S .

Large birds with naked heads and necks with a tuft of black bristles, depending from upper breast; tail long and fan-like; tarsus furnished with a spur.

270, WILD TURKEY.

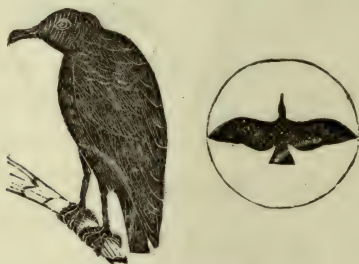
Large, 45; differs from the dark form of the well-known domestic Turkey in

having rather more brilliant irridescent tints and in having pink feet. U. S., from Chesapeake Bay to Gulf Coast and west to Plains.

271. FLORIDA TURKEY.

Darker than last with little white on wings. Southern Fla.

Fig. 218



Black Vulture. 1-12.

VULTURES.

Large; head, naked; large wings fitted for strong flight; feet, adapted for walking, but not for grasping; food, usually animal matter found dead and sometimes partly decayed. Nests in hollow logs, rock cavities,

etc. Eggs, 2, in our species white mottled with brown. Young, covered with down when hatched, but helpless. Sexes, similar.

The small figures in circles are silhouettes of the birds as seen in flight to give the proportions of wings and tail.

272. TURKEY VULTURE.

Dark-brown; head, livid red; tail, rounded, fig. 217. America from N. J., the Ohio Valley, and Saskatchewan, southward to Patagonia, casual in N. E. Flight, steady with long, sweeping curves, sailing most of the time without flapping, sometimes at a considerable height where it moves in wide circles. Food, mainly freshly killed animals. Only vocal sound, a harsh hiss. Social, gathering in large flocks, especially to roost at night.

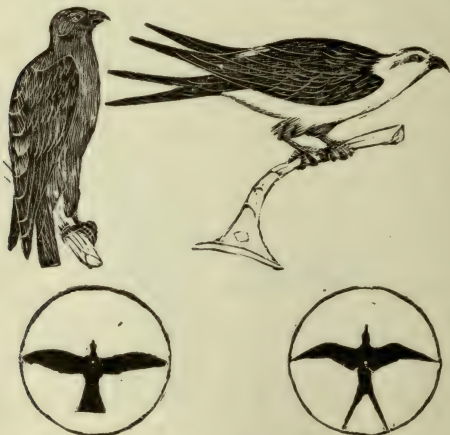
273. BLACK VULTURE.

Black, including head; space on wing beneath, showing in flight, white; tail, short and square, fig. 218. N. C. to Fla., north to lower Ohio Valley west to Great-Plains, south to Mex. and into S. A., casual in N.

E. and N. Y. Flight by alternate sailing and flapping with rapid wing-beats; sometimes ascends to a considerable height, but moves in comparatively small circles. Food,

Fig. 220

Fig. 219



Mississippi Kite. 1-8.

Swallow-tailed Kite. 1-8.

largely decaying animal matter. Rather more social than last.

HAWKS, EAGLES, ETC.

Birds of varying sizes; bills, strongly curved and hooked; feet, strong; claws,

capable of grasping. Young, covered with down when hatched, helpless and fed by parents. Females, larger than males.

274. SWALLOW TAILED KITE.

Large, 22; form, slender; tail, deeply forked; black above; head and lower parts, white, fig. 219. Breeds in U. S. from N. C. and Minn. southward, goes south in Oct. to winter in S. A., north in April; casual in southern N. E. Flight, swallow-like, very graceful and easy. Food, chiefly snakes and other reptiles, which it catches by swooping downward and, grasping them with its claws, eats them as at flies. Nests in trees; eggs, 4-6, green-white marked with brown.

275. MISSISSIPPI KITE.

Smaller, 14; head, neck and beneath, ashy; back, black; longitudinal stripe on each wing (showing in flight), chestnut; white wing bar, fig. 220. Southern U. S. from S. C. southward; casual north to Penn., Wis. and Ia. Winters in Guatemala.

276. WHITE-TAILED KITE.

Larger, 16; head, neck, tail and beneath, white; above and central tail feathers, ash-gray; patch on bend of wing, black. Breeds

Fig. 221 in southern U. S. from S. C. and southern Ill. to Tex. and Cal.; winters in S. A.; casual in Mich.



Everglade
Kite. 1-8.

277. EVERGLADE KITE.

A little larger, 17; black above, brown beneath; base of tail and its coverts, white; female, duller, fig. 221. Breeds in Fla., Cuba. and southward into eastern S. A. Nests placed in low bushes, eggs, 1-2, bluish white marked with brown. Flies low over marshes with rather slow wing-beats and erratic movements. Food, chiefly fresh-water mollusks.

278. MARSH HAWK.

Larger, 23; above, ashy-blue; upper tail-coverts, white; white beneath, fig. 222. Female and young, brown above, reddish

beneath. Breeds throughout N. A., south in early Nov. to winter from N. C. south to Panama, rarely as far north as Mass.; north in April. Nests placed in bushes in marshes, eggs, 3-5, white, slightly spotted with reddish. Flies, low over fields and marshes, moving with irregular flight and slow wing-

Fig. 222



Marsh Hawk. 1-6.

beats. Food, frogs, mice, snakes and lizards. Common.

279. WHITE GYRFALCON.

22, wings pointed, white somewhat banded on back with dusky, fig. 223. Young, streaked below with black. Arctic, wander-

ing south in winter to northern N. E. Nests, on cliffs.

280. GRAY GYRFALCON.

Size of last, dusky throughout, rather broadly streaked on head and banded on

Fig. 223



White Gyr Falcon. 1-6.

tail and beneath with white. Arctic, straggling southward in winter.

281. GYRFALCON.

Differs from last in being darker; light bands much narrower. Young, even darker. Northern Europe, Greenland and Arctic America, south to northern Labrador, rare in winter in Mass. and R. I.

282. BLACK GYRFALCON.

Size of last, but appearing nearly black. Labrador, south in winter, rarely to Canada, Me., Mass. and N. Y.

283. DUCK HAWK.

Form of last, but smaller, 18; wings, very pointed; seeming black above, white

Fig. 224



Duck Hawk. 1-6.

below; prominent black markings on side of head; tail, banded with white, fig. 224. Young, reddish beneath. N. A., breeding locally throughout U. S., nesting usually on cliffs; south in Sept.-Oct. to winter in Fla., southward into S. A. Flight, swift with

rapid wing-beats, seldom sailing. Captures its prey, ducks and other birds, on the wing. Eggs, 3-4, creamy white, very thickly mottled with dark-brown. Not very common.

284. PIGEON HAWK.

Smaller, 11; form of last but appearing black above; white beneath, heavily

Fig. 225



Pigeon Hawk. 1-6.

streaked with dark brown; tail, with four light bands, one of which is at tip, fig. 225; wings banded on inner webs with white; conspicuous in flight. Female and young, more reddish below. Flight as in last. Breeds from northern border of U. S. north-

ward; nests, on branches of trees and in holes of trees and cliffs; south in Sept. and early Oct. to winter in the Bahamas and northward.

285. RICHARDSON MERLIN.

Differs from last in having five or six light bands on tail and both outer and inner

Fig. 226



Sparrow Hawk. 1-4.

webs of primaries banded with white. Western N. A. from Mississippi River to the Pacific.

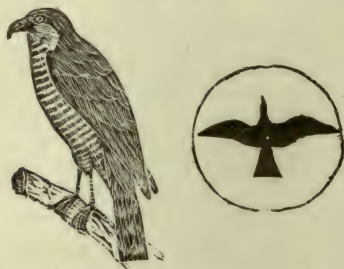
286. MERLIN.

Differs from last in having a large patch of black on cheek. Old world, accidental in Greenland.

287. SPARROW HAWK.

Smaller, 10; cinnamon above, lighter below; two oblique marks on side of head, some bands above, spots below, subterminal band on tail and wings, black; top of head, upper wing coverts and band on secondaries, ashy-blue; outer tail-feather, throat, cheek

Fig. 227



Sharp-shinned Hawk. 1-6.

and tip of tail, white, fig. 226. Female, lighter below, banded above and streaked below with black. Eastern N. A. south to Ga.; winters from Mass. southward. Nest, in holes of trees, cavities in cliffs or houses; eggs, 4-6, buff thickly spotted with cinnamon. Cry, a rather shrill rattle. Flight,

rapid with quick wing-beats, sometimes suspends itself on rapidly vibrating wings, like a Belted Kingfisher; frequently jerks its tail when perching.

288. LITTLE SPARROW HAWK.

Similar to last, but smaller; cinnamon spot on head, small or absent in male; female, more broadly banded with black above. Gulf States, resident.

289. CUBAN SPARROW HAWK.

Differs from last in being nearly slaty-gray above; beneath, deep rusty. Female, rusty above and below. Cuba; casual in Fla.

290. KESTREL.

Differs from Sparrow Hawk in being larger and in having blue of head extending over a portion of upper parts, and in being conspicuously streaked below. Europe; accidental in Mass.

291. PRAIRIE FALCON.

Large, 18; brown above; band on back of head and beneath, white, heavily streaked with brown. Western U. S.; casual in Ill.

292. SHARP-SHINNED HAWK.

Small, 11; wing, short; tail, long, square; legs, long slender; brown above, pale reddish beneath; four black bands on tail, fig. 227. Young, streaked beneath. Flies with alternate flappings and sailing; seldom circles in air. Readily flies through foliage in pursuit of small birds. Breeds

Fig. 228



Cooper Hawk. Silhouette.

throughout N. A. south to Panama; winters from Mass. southward, south in Oct.; north in April. Nests, in trees; eggs, 4, blue-white, spotted. Cries, a series of short rather shrill screams.

293. COOPER HAWK.

Differs from last in being larger, 17, and in having tail rounded; fig. 228. Cries,

louder and more whistling. Range, times of migration and nesting habits, similar to last.

294. GOSHAWK.

Larger, 21; similar in form to last; dark slate above, blue-gray beneath; three bands on tail; top of head and head band on its side, black. Young, brown above, white beneath, streaked with black. Breeds from northern N. E. northward; goes south to winter from Middle States northward; north in April. Sometimes common in Mass.

295. MEXICAN GOSHAWK.

Smaller than last, 16; also differs in having upper tail coverts white, and tail black with two or three bands of white. Young, tail banded with black. Mexico and southward; accidental in southern Ill.

296. RED-TAILED HAWK.

Larger, 20; wings, longer; tail, long in proportion to wings, but somewhat rounded; legs, stout; brown above; tail, cinnamon,

with a subterminal band of black; white beneath with a band of heavy black streakings across middle of body, fig. 229. Young, with tail paler and with several black bands (twelve or more). Breeds throughout eastern N. A., north to Labrador. Note, a wheezy

Fig. 229



Red-tailed Hawk. 1-10.

scream, often given as the bird circles high in air. Nests in trees, eggs, 4, white spotted.

297. KRIDER HAWK.

Differs from last in being lighter above; no terminal band on tail, and lacks band of spots beneath. Plains of U. S., from Dakota and Wyoming to Minn., and Ill. south to Tex.

298. WESTERN RED-TAIL.

Differs from Red-tail in being darker above with sometimes three bands on tail, more rufous beneath. Western N. A. from Rockies to Pacific; casual in Ill.

299. HARLAND HAWK.

Size of last; seeming black above, varying from black below to white, but, if white, then streaked across breast and on sides with black. Young, tail banded with lighter. Breeds in the Gulf States and lower Mississippi Valley; occasionally north to Penn. and Ia.

300. EUROPEAN BUZZARD.

Similar to Red-shouldered Hawk, but tail with from 10 to 13 narrow black bands. Europe, accidental in Mich.

301. RED-SHOULDERED HAWK.

Smaller than Red-tailed, 21; tail shorter in proportion to spread of wings; appearing black above; wings with many white bands,

tail with four; fig. 230; white beneath, banded with reddish. Young, streaked with black beneath; tail with many white bands. Breeds throughout eastern N. A. from Fla. to Nova Scotia; winters from Mass. southward, south in Oct.; north in April. Note,

Fig. 230



Red-shouldered Hawk. 1-10.

a loud high *ke-arr* repeated several times with the last syllable prolonged. Breeding habits much like Red-tail.

302. FLORIDA RED-SHOULDERED.

Differs from last in being smaller and darker. South Atlantic and Gulf States.

303. SWAINSON HAWK.

Differs from Red-shouldered in having tail tipped with white; there is a dark phase in which the under parts are dark brown and intermediates occur between this and light phase. Young, ash-red beneath thickly marked with drop-shaped streakings, especially across breast. Western N. A., east to Ill.; casual to Mass. and Me.

304. BROAD-WINGED HAWK.

Smaller than Red-shouldered, 15, there are two white bars only on tail. Young, has throat whiter. Breeds throughout N. A. from Fla. to New Brunswick; south in Oct. to winter from Va. to northern S. A.; north in April. Note, a squeaking whistle.

305. SHORT-TAILED HAWK.

A little larger, 16; dark brown above, white beneath; seven ashy bands on tail; reddish on sides of breast. Young, streaked beneath; red of breast absent. A dark phase has breast dark brown; forehead always white. S. A. north to Fla.

306. ROUGH-LEGGED HAWK.

Large, 21, six to eight white tail bands; white beneath, band of spots on breast and

Fig. 231



Rough-
legged
Hawk. 1-8.

broad band on abdomen, black, fig. 231. Then is also a black phase with intermediates, but the basal three-fourths of tail, seen from below, is always white. Breeds throughout N. A. north of the U. S.; winters from N. E. south to N. C. from Nov. to April. Legs very short and thus the bird sits low. Flight, heavy with slow wing-beats.

307. FERRUGINOUS HAWK.

Size of last; differs in being more reddish above; beneath, white unmarked; tail, nearly white; from this varies into a nearly black phase. Western N. A. west to the plains; casual in Ill.

308. GOLDEN EAGLE.

Large, 35; dark-brown throughout; bill, brown; feet, yellow; tarsus feathered to

toes, fig. 232. Young with basal two-thirds of tail white. N. A. south to Mex. Breeds chiefly on unsettled mountaneous districts; nest, usually on cliffs; eggs, 2, white spotted with brown.

Fig. 232



Golden Eagle. 1-12.

309. BALD EAGLE.

Size of last, differs in having head, neck and tail white; tarsus, naked; bill and feet, yellow, fig. 233. Young, dark-brown throughout. U. S. breeding in unsettled districts; nests in trees or on cliffs; eggs, 2, white, unspotted. Cries, harsh and loud, alarm note, a cackling cry. Ordinary flight, strong and direct with slow wing-beats.

Frequently robs the Osprey of fish, when it moves with a rapid flight with quickened wing-beats. Sometimes circles high in air.

310. NORTHERN BALD EAGLE.

Differs from last in being larger. N. A. north of the U. S.

Fig. 233



Bald Eagle. 1.16.

311. GRAY SEA EAGLE.

Differs from last in having the head always brown. Northern Europe, Asia and Greenland.

312. OSPREY.

23; wings, very long; tail, short; black above, white beneath; line through eye and

band of spots on breast, black, fig. 234. Breeds from Hudson Bay to Fla. west to Pacific. Winters from N. C. to northern S. A. South in Oct., north in April. Food, wholly fishes. Flight, strong, direct; wing-beats, slow; often circles over water and drops into it to secure prey which it carries head

Fig. 234



Osprey. 1-10.

forward. Nests in trees, eggs, 3-5, creamy thickly spotted with red-brown. Cries, shrill, whistling screams.

313. AUDUBON CARACARA.

Wings, tail and legs, long; 23; dark-brown above; base of tail, sides of head,

bands on tail and beneath, white, broad band on abdomen and finer elsewhere, black; feet, yellow. Resident in Fla., Tex., Ariz. south to northern S. A. Flight, direct by alternate flippings and sailings and will sometimes circle in air like Vultures. Chiefly terrestrial, feeding much upon dead animals, fig. 235.

Fig. 235



Audubon Caracara. 1-8.

PARROTS, ETC.

Birds of varying sizes and colors, with strong hooked beaks.

314. FLORIDA PAROQUET.

Medium size, 14; tail, long and pointed, yellow-green; head and neck, yellow; fore-

head, sides of head, and inner webs of tail feathers, orange, fig. 236. Young, with head and neck green. Flight, very swift and direct, with rapid wing-beats. Cries, harsh and loud. Nests in communities. Former range, throughout the Gulf and

Fig. 236



Florida Paroquet. 1-6.

south Atlantic States. Now nearly extinct, perhaps still found in a small section of Fla.

315. WESTERN PAROQUET.

Differs from last in being more blue-green in color. Mississippi Valley south to northern La. Now wholly extinct.

O W L S .

Well known-birds of varying sizes; bills strong and hooked; chiefly nocturnal. Young, inactive when hatched, and covered with whitish down. Eggs, white, 2-7. Flight, direct with rather slow wing-beats. Food, small animals, insects and occasionally fishes.

Fig. 237



Barn Owl. 1-10.

316. BARN OWL.

Wings, very long; tail, short; 17; pale yellow-brown spotted with darker; iris, brown, fig. 237. U. S., rare in northern portion, resident from middle sections southward.

317. BARRED OWL.

Larger, 20; banded with black and white, transversely on upper breast, longitudinally below this; iris, brown; bill, yellow, fig. 238. Eastern U. S. from Gulf States to Canada. Frequents woodlands. Nests in trees. Cries, prolonged hoots,

Fig. 238



Barred Owl. 1-11.

woc woc wu woo followed by a series of
wock wock wock wo-o-o.

315. FLORIDA BARRED OWL.

Smaller and darker than last. South Atlantic and Gulf States.

316. GREAT GRAY OWL.

Larger, 22; gray, irregularly barred above and streaked below with white; iris and bill, yellow. Arctic America straggling south in winter as far as N. J. and Ill.

Fig. 239



Long-eared Owl. 1-10.

317. LONG-EARED OWL.

Smaller, 15; wings, long; head with prominent ear tufts; dark-brown spotted and mottled with yellow-white which predominates below, fig. 239. Resident throughout temperate N. A. Occurs in thick swamps. Note, a single loud screech. Nests in trees.

318. SHORT-EARED OWL.

Size of last, differs in having light markings predominating, fig. 240, prominent dusky spot on under wing showing in flight. Occurs in open sections commonly on sea coast among low bushes; rises suddenly

Fig. 240



Short-eared Owl. 1-10.

when alarmed and flies with long, downward wing-beats moving with excentric flight.

319. GREAT HORNED OWL.

Larger, 23, wings shorter, ear tufts long and large. Dark brown, mottled, barred and spotted with lighter; patch on throat and upper breast, white, fig.

241. Eastern N. A. from Labrador to Fla. Occurs in unsettled sections in heavy woodlands. Cries, not unlike those of the Barred Owl, but rather louder and more deliberately given. Nests in trees, sometimes in cavities.

Fig. 241



Great Horned Owl. 1-12.

320. LABRADOR HORNED OWL.

Similar to last, but with the dark areas more extended. Labrador, Newfoundland and south in winter to Ontario.

321. ARCTIC HORNED OWL.

Similar to Great Horned, but much lighter the light areas predominating. North-central Canada, south in winter to Wisconsin and northern Ill.

322. SCREECH OWL.

Smaller, 9; reddish above, white beneath, streaked on back, barred on wings and tail, barred and streaked beneath, with black, fig. 242. Above form red varies to gray with markings grayish in tone. Resident in temperate eastern N. A. west to the plains, south to Ga. Very common, but

Fig. 242



Screech Owl. 1-5.

unless at night, seldom seen on account of many passing the day in holes. Nests in holes. Note, a shivering cry often repeated. Gives a croak of alarm.

323. FLOUDA SCREECH OWL.

Differs from last in being smaller and darker. South Atlantic and Gulf States.

324. SAW-WHET OWL.

Smaller, 8, red-brown above; narrow white lines on head and face, and spots elsewhere; beneath, white, streaked with red-brown, three bars of spots on tail, fig. 243. Breeds from Middle States northward. Not common. Note, a rasping cry.

Fig. 243



Saw-whet Owl. 1-8.

325. HAWK OWL.

Medium, 15; tail, long, graduated; wings, long; dark-brown above; lined and spotted with white; eight lines of white spots on tail and beneath, white, here transversely banded with black; face, white, nearly surrounded by black line; spot on neck, black, fig. 244. Breeds from Newfoundland north-

ward, wandering south into northern U. S. in winter. Rather diurnal.

Fig. 244

Hawk Owl.
1-10.

326. SNOWY OWL.

Large, 22; white spotted and barred, especially above, with black, fig. 245; females, more heavily banded than males. Note, a whistling cry. Northern portions of northern hemisphere; breeds north of U. S., wandering south in winter to Middle States, Nov. to April. Flight, heavy and direct. Frequents sand dunes on coast. Rather diurnal.

327. BURROWING OWL.

Small, 10; white, barred and spotted, more heavily above, with red-brown. Wings and legs, long; tail, short. Frequents open sections. Nests, in holes in ground. Western U. S. from Great Plains to Pacific; accidental in N. Y. and Mass.

Fig. 245



Snowy Owl. 1-15.

CUCKOOS.

Slender birds of varying sizes; tails long; two toes in front and two behind.

Fig. 246



Ani.

328. ANI.

Large, 14; bill, compressed, ridge, elevated; black, fig. 246. Cries loud, but minor

in tone. Flight, heavy and jay-like. Social at all times, several females placing their chalky-white eggs in one nest; probably polygamous.

Fig. 247



Yellow-billed Cuckoo. 1-4.

329. YELLOW-BILLED CUCKOO.

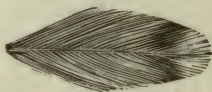
Smaller, 12; brown above, white below; tail dark; outer feathers broadly tipped with white; wing, strongly tinged with cinnamon; under mandible, yellow; space about eye dark, fig. 247. Breeds in eastern temperate N. A., west to plains; winters in

Costa Rica, south in Sept., north in May. Nests of sticks in bushes; eggs, 4, green unspotted. Notes, *cow-co*, given at intervals.

330. MANGROVE CUCKOO.

Differs from last in being strongly tinged with reddish yellow beneath and in having dark space about eye larger. Breeds in West Indies; rare on Fla. Keys and in La.

Fig. 248



Black-billed Cuckoo.

331. MAYNARD CUCKOO.

Differs from last in being paler beneath. Bahamas, largely resident; rare on Fla. Keys. Notes, *om-on-on-on-qua-qua-qua-coo-coo-co*; the first four and last three are cuckoo-like, but the three middle harsh.

332. BLACK-BILLED CUCKOO.

Differs from Yellow-bill in having tail like back, and narrowly tipped with black

and white, fig. 248; absence of cinnamon on wing and black on head; under mandible dark blue; eyelids, red, fig. 249. Breeds through eastern N. A. west to Rockies, north to Labrador, winters in S. A. Notes, *coo-coo-*

Fig. 249



Black-billed Cuckoo.

coo-coo, given without interruption. Eggs, dark blue-green.

W O O D P E C K E R S .

Well-known birds with chisel-shaped bills, large heads, long wings; tail feathers stiffened and pointed; toes two in front and

two behind. Eggs, 6-7, white, polished, placed in holes. Young, naked and helpless. Flight, heavy and undulating, but often swift. Drum on trees, etc., as a roll call. Climb head first, but back down.

Fig. 250



Yellow-bellied Sapsucker. 1-6.

333. YELLOW-BELLIED SAPSUCKER.

Small, 8.50, longitudinal white patch on wing; male, with crown and throat, crimson, fig. 250; female, throat white; both much mottled above, yellow below, and with black spot on breast; young with black spot on breast replaced by gray and with little red on head; adult plumage gradually

assumed. Breeds in eastern N. A. from northern Mass., northward to middle Canada and south along the mountains to N. C. Cries harsh and rattling; gives the *yucka* rather rarely.

334. RED-BELLIED WOODPECKER.

Larger, 10; male, top of head all scarlet, ashy beneath, tinged with red; back, banded

Fig. 251



Red-bellied Woodpecker. 1-7.

with black and white; upper tail coverts, white, fig. 251. Female, top of head, gray, nape scarlet. Resident in eastern U. S. from Pa. southward; casual as far north as Mass. Cries, often uttered, harsh and quer-

ulous, *yuckâ* note rarely given. Frequents open woodlands.

335. RED-HEADED WOODPECKER.

Smaller, 9; colors in masses; head and neck all around, crimson; band on secondaries and rump and beneath, white; remain-

Fig. 252



Red-headed Woodpecker. 1-6.

ing upper portions, black, fig. 252. Young, head, gray; white of secondaries, broadly banded with black. Sexes, similar. Breeds in the U. S. west to the Rockies; local east of the Hudson, usually migratory north of Penn. Very noisy, cries harsh and loud.

336. HAIRY WOODPECKER.

10, black above, white beneath; on side of head, longitudinal stripe on back transverse bands of spots on wings and outer tail feathers, white, fig. 253; male, with red on nape. Resident in northern and middle

Fig. 253



Hairy Woodpecker. 1-6

U. S. north into southern Canada, south to Va., cries sharp sometimes rapidly repeated as a call. Gives *yucka* notes.

337. NORTHERN HAIRY WOOD-
PECKER.

Differs from last in being larger. Breeds in northern N. A. north of U. S.

338. NEWFOUNDLAND WOODPECKER.

A little smaller than last with much less white on back and wings, black spots on dorsal stripe. Newfoundland.

Fig. 254



Downy Woodpecker. 1-4.

339. SOUTHERN HAIRY WOOD-
PECKER.

Smaller than Hairy a little darker. South Atlantic and Gulf States, north to Va.

340. SOUTHERN DOWNY WOOD-
PECKER.

Smaller than last, 5.50, bill proportionately smaller, white of outer tail feathers barred with spots of black; dusky beneath.

341. DOWNY WOODPECKER.

Larger than last, white beneath, fig. 254. Eastern N. A. from eastern Va. and mountains of Ga. north to Canada.

Fig. 255



Red-cockaded Woodpecker.

342. NORTHERN DOWNY WOODPECKER.

Larger than last, bars on tail narrower. Northwestern N. A., south in winter to Wis. and N. Y.

343. RED COCKADED WOODPECKER.

Larger, 8.25; differs from Hairy Woodpecker in being transversly banded on back

with white, without dorsal stripe, red of head in male confined to a small spot on its on its side, fig. 255. Southern N. S. from Va. southwards; casual in Penn. and N. Y. Frequents pine barrens. Somewhat social and very noisy; cries, harsh and querulous.

Fig. 256



Arctic Three-toed Woodpecker. 1-6.

344. ARCTIC THREE-TOED WOOD- PECKER.

Larger than last, 9.50; toes three, black above, wings banded with white; beneath, white, banded on sides with black. Male, with top of head yellow, fig. 256. Northern

N. A.; in winter, wandering south into northern U. S. as far as N. E.

345. AMERICAN THREE-TOED
WOODPECKER.

Differs from last in having the entire back banded with white, fig. 257. Range similar to last.

Fig. 257



American Three-toed Woodpecker. 1-6.

346. IVORY-BILLED WOODPECKER.

Large, 21, neck thin; black; bill, secondaries, line extending on side of neck, white; crest on back of head, scarlet; black in female, fig. 258. Former range through most of the southern States, now restricted

to a few isolated localities in the lower Mississippi Valley and Gulf States, chiefly Fla.

347. PILEATED WOODPECKER.

Smaller, 18.50, black; throat, line on side of neck, patch on primaries, basal half

Fig. 258



Ivory-billed Woodpecker. 1-10.

of wing beneath, showing in flight, white; maxillary patch, top of head and crest, scarlet, fig. 259. Female, front of head and maxillary patches, black. Eastern U. S. from northern Fla., southern Tex., north to Md., Penn. and southern Ill.

348. FLORIDA PILEATED WOOD- PECKER.

Similar to last, but darker and smaller.
Central and southern Fla.

Fig. 259



Pileated Woodpecker. 1-9.

349. NORTHERN PILEATED WOOD- PECKER.

Similar to Pileated, but larger and lighter.
Northern eastern N. A. from West Va.,
western Penn., north into Canada. All of
the Pileated Woodpeckers frequent heavy
forests in the wilder sections. Notes, not

unlike those of the flicker, but are louder. Roll-call also similar but with more volume.

350. FLICKER.

Smaller, 12; bill, curved, white spot on rump, conspicuous in flight; brown above, banded with black; ash-red beneath, maxil-

Fig. 260



Flicker. 1-6.

lary patch, crescent on breast, and round spots beneath, black; tail and wings beneath, golden-yellow; scarlet patch on back of head, fig. 260. Female, without black maxillary patch. Eastern U. S. from Fla. north to N. C. and southern Va., Ind. and Ill. Cries, varied; a whistling scream, an in-

interrupted call, and in spring a series of *yucca* notes. Subsists chiefly on ants in summer.

351. NORTHERN FLICKER.

Similar to last, but larger. Northern and Central U. S., east of Rockies, south to

Fig. 261



Chuck-Will's Widow. 1-4.

Va. and southern Ill., north to northern N. E. In winter to Gulf Coast and Tex.

352. BOREAL FLICKER.

Larger than last. From Labrador, north to limit of tree growth, north west to Alaska.

GOATSUCKERS.

Long-winged birds with small bills, wide gape, large eyes, small feet; colors dull and inconspicuous, when perching on trees sit longitudinally. Food, insects.

Fig. 262



Whip-poor-will. 1-4.

253. CHUCK-WILL'S WIDOW.

Large, 13, mixed reddish brown and black; yellow-red crescent on throat; patch on three outer tail feathers, buff below white above, fig. 261. Female, lacks the crescent on throat and white on tail. Breeds from Va. southward through South Atlantic and Gulf States, winters in Cuba, eastern

Mexico, south to Central America; south in Sept., north in March; rare in Bahamas; accidental in Mass. Note. *chuck-will's-widow* rapidly given, sometimes also a series of chuckling sounds. Found in woodlands by day. often flies about dwellings at night. Flight, erratic and flitting.

Fig. 263



Nighthawk. 1-5.

354. WHIP-POOR-WILL.

Smaller, 10, darker than last, white crescent on throat and patch on outer tail feathers white on both surfaces, fig. 262; female, without crescent on throat. Breeds throughout eastern N. A. from N. C. north

to Canada, west to Plains. Note, *whip-poor-will*, given very rapidly and repeatedly, also a chuckling sound. Found in woodlands by day. Flight, similar to last.

355. NIGHTHAWK.

Size of last, gray above, banded with white and black beneath; large spot on primaries, crescent on throat and band of spots on tail, white, fig. 263. Female, lacks white on tail and crescent is indistinct. Breeds throughout eastern N. A. from northern Fla. to Labrador; winters in S. A.; south in Sept., north in May. Eggs placed in gravelly spots, sometimes on gravelled roofs of buildings. Note, a shrill, rasping cry repeated when the bird is darting zigzag high in air and a booming sound as the bird descends from this height to a point near the ground when he turns to ascend. Often flies in the day time and regularly in the evening, not by night.

356. FLORIDA NIGHTHAWK.

Smaller and darker than last. Fla. to Tex.; winters in S. A.

357. HOWELL NIGHTHAWK.

Similar to last, but lighter above and more reddish. Western U. S., casual in Ill.

S W I F T S .

Compact birds with short bills, long primaries, but other parts of wing shortened. Flight swift.

Fig. 264

358. CHIMNEY SWIFT.

Small, 5; spindle-shaped, tail short and spiny at tip; appearing black, fig. 264. Young naked and helpless when hatched. Nests of sticks fastened together with glue secreted by the mouth of the bird, (sticks gathered when bird is on the wing) placed usually in chimneys or occasionally in hollow trees, caves, etc. Eggs, 4, white. Flight swift, continuous by a rapid alternate quivering movement of wing tips and sailing. Food, insects. Cries, a shrill chatter, always given in flight, never when in the chimney.

Chimney
Swift.

H U M M I N G B I R D S .

Small birds with wings similar to last, but differ in having an awl-like bill. Nests made of fine material covered with lichens; eggs, 2, white. Young, naked and helpless. Flight, swift and darting; wing-beats exceedingly rapid. Food, sweet nectar of flowers and insects. Found only in America.

359. RUBY-THROATED HUMMING-
BIRD.

Small, 3.50; tail forked in male, rounded in female; green above, white below, male with throat metallic ruby; female with tail white tipped, fig. 265. Breeds throughout eastern N. A. from Labrador to Fla. Winters from Fla. to Mex. Has a weak chirping cry.

K I N G F I S H E R S .

Of varying sizes. Bills and wings, long; tails, short; feet, small. Food, usually fishes.

360. BELTED KINGFISHER.

12, head crested; bluish above, white beneath; male with a single band of bluish



Fig. 265. Ruby-throated Hummingbird.

on breast, fig. 266; female, with an additional one of red-brown. Breeds throughout N. A. from southern border of U. S. north to Arctic Ocean; winters from Middle States, occasionally from Mass., south to Panama; south in Oct., north in April.

Fig. 266



Belted Kingfisher. 1-10.

Nests, in holes in perpendicular banks; eggs, 6, white. Note, a harsh rattle. Flight, direct, often slow and rather jerky, but sometimes swift and darting. Poses in air when fishing and drops into water to secure prey.

SONGLESS PERCHERS.

Small birds inhabiting temperate and tropical regions which are not capable of producing greatly varied songs. Young,

Fig. 267



Scissor-tailed Flycatcher. 1-4.

naked and helpless. All of our species are flycatchers, taking insects chiefly on the wing.

361. FORK-TAILED FLYCATCHER.

Long, 12; tail, very long and forked; ashy above, white beneath; top and sides

of head, black; crown patch, yellow. S. A. north to Mex.; accidental in U.S. east to N. J.

362. SCISSOR-TAILED FLYCATCHER.

Differs from last in having portion of tail, under wing coverts and hind parts beneath, rosy, fig. 267. South-western

Fig. 268



Kingbird. 1-4.

States, casual in Fla.; accidental in N. J., Md., Va., Ill., N. E. and Canada.

363. KINGBIRD.

Shorter, 8.40; black above, white beneath and on tip of tail, fig. 268. Crown patch, orange, but rarely seen. Breeds

throughout eastern N. A. Winters from Mex. to S. A., south in Sept., north in early May. Nests in trees and bushes, often uses everlasting; eggs, 4, creamy, spotted with brown. Cries, shrill and loud, sometimes darts about in air, especially in evening

Fig. 269



Gray Kingbird. 1-4.

uttering a shrill twittering; flight, direct, with rapid, downward wing-beats. Frequent open sections and perches much, often low, launching out after insects.

364. GRAY KINGBIRD.

Differs from last in being larger, 9.50, tail somewhat forked, lighter above, no

white on tail tip, fig. 269, 1-4. Bahamas, West Indies, coast of Fla., Ga., and S. C. Winters in S. A.? north in April. More noisy than last with harsher cries.

Fig. 270



Crested Flycatcher. 1-4.

365. ARKANSAS KINGBIRD.

Differs from last in being bright yellow beneath, throat ashy, lighter above. Western U. S.; accidental in Md., N. J., Mass. and Me.

366. CRESTED FLYCATCHER.

A little smaller, 9, feathers of head elongated; back, green; throat, ashy; elsewhere beneath, yellow; inner webs of wings

and tail, cinnamon, fig. 270. Breeds through eastern U. S. north into southern Canada, south in Sept., north in May. Nests in holes of trees, and always uses the cast off skin of snake among other material; cries, surprised whistles, followed by a series of

Fig. 271



Phoebe. 1-4.

chatters, all loud. Frequents open woodlands and orchards. Of local distribution in N. E.

367. PHOEBE.

Smaller, 7.; brown above, yellow-white beneath, fig. 271; more so in winter; bill, wholly black. Breeds throughout eastern

N. A. from S. C. north to Me. and southern Canada. Winters from N. C. to Fla.; south in Oct., north in April. Moves tail up and down and switches it immediately after alighting. Note, *phee-bee* quickly and rather harshly given with accent on first syllable,

Fig. 272



Wood Pewee. 1-4.

sometimes the note is prolonged and then becomes more musical; occasionally it is used as a flight song given in spring when it is quickly repeated with some variation; heard from spring to late in fall. Nests placed in shelter of out-buildings, bridges, rocks, banks, etc., composed of moss, grass,

etc., mixed with mud; eggs, 4-5, white, occasionally dotted with reddish.

368. SAY PHOEBE.

A little larger than last, paler above and ash-red beneath. Western U. S., accidental on Cape Cod, Mass.

Fig. 273



Olive-sided Flycatcher. 1-4.

369. WOOD PEWEE.

Smaller, 6.50; darker above, white beneath, prominent white wing bands; under mandible, yellow, fig. 272. Breeds throughout eastern N. A. from Fla. to Newfoundland; south in Oct. to winter in Central America; north in May. Notes,

pee-wee or *pe-e-wee* given in a sweet, long drawn resigned tone. Frequents open woodlands and groves, sometimes in villages. Nests of grass, etc., covered with lichens, saddled on a limb of a high tree. Eggs, 3, creamy blotched with brown.

370. OLIVE-SIDED FLYCATCHER.

Larger, 7.50; more robust, a band across breast, olive, a patch of white on sides of rump (only occasionally seen), under mandible yellow, fig. 273. Notes, rather continuously given, much like those of a young Robin, but louder and more minor. Frequents open spots near woodlands, and often perches on dead trees. Breeds in mountainous parts of U. S. from northern N. E., occasionally from Mass. north into Canada. Nests, of sticks, placed in trees; eggs, 4, similar to last.

371. LEAST FLYCATCHER.

Smaller, 5.50, brownish-olive above; yellow-white beneath; two wing-bands and

eye-ring, white; under mandible, dark, fig. 274. Breeds in eastern N. A. from Penn. and N. J. northward into Canada; winters in Central America, south in Sept., north in May. Alarm note a short *pewit*, song notes, *chebec*, given with great energy and

Fig. 274



Least Flycatcher. 1-4.

repeated constantly as the bird throws its head up and jerks all over; also gives a low twitter while wings are slightly raised and fluttered. Frequents orchards and low open growths; nests in trees of hempen-fibers; eggs, 4, white, usually unspotted.

372. TRAIL FLYCATCHER.

A little larger than last; eye-ring pale-yellow; under mandible, yellow. Western N. A. from Mississippi Valley east into Ohio, Ill. and Mich.

373. ALDER FLYCATCHER.

Darker than last. Breeds in eastern N. A. from Me., rarely from Mass., northward. Nests of sticks often placed in alders; eggs, creamy spotted with red-brown. Notes, *ke-wick*, often repeated, but rather more slowly and harshly than in the Least Flycatcher. Frequents low growths in swampy land, often alders.

374. GREEN-CRESTED FLYCATCHER.

Larger than Alder, green above and lighter beneath with less olive on sides. Eastern N. A. north to southern N. Y. and southern Mich., rare as far north as southern Mass.; winters in Central America, south in Sept., north in late May. Notes, *se-wink* emphatically given, sometimes followed by

a series of chuckling notes made with fluttering wings; frequents low growths in wooded glens. Nests of sticks, lichens, and moss, placed in bushes, usually a witch hazel; eggs, 4, creamy, spotted and blotched with red-brown.

375. YELLOW-BELLIED FLY-
CATCHER.

Smaller than last, yellow-green above; pale greenish yellow on wing-bands, eye-ringing and beneath. Breeds from northern U. S. northward to southern Labrador; winters in Mexico and Central America; south in Sept., north in late May. Occurs in alder and other thickets, keeps low among the foliage, not very active. Note a low *peea* rather plaintive and long drawn, frequently given; then, less often, a gravely rendered *kil-lick*. Nests on ground in shelter of upturned roots of fallen trees or in a bunch of moss; eggs, 4-5, white, dotted with pale reddish.

While all of these four species of Fly-

catchers are not difficult to recognize in spring when they are giving their notes, in autumn when they are silent it is extremely hard to identify them, especially as all are then in more obscure dress, when the characteristic markings are quite alike. It is well also to remember that all migrate almost as soon as the young are able to do so, and consequently none of the species would be apt to have time to wander north of their usual habits in autumn.

376. VERMILLION FLYCATCHER.

Small, 6; head and beneath, scarlet vermillion; brown above. Female, dull white beneath, tinged with orange posteriorly. South-western U. S. One taken in Tallahassee, Fla., March 25, 1901.

SINGING PERCHERS.

Usually small birds capable of producing varied and more or less musical sounds. Young hatched naked and helpless.

Larks.

Wings, long; secondaries, short; colors, dull.

377. SKY LARK.

7.50; brown above and streaked with lighter, white beneath reddish on breast and sides where streaked; outer tail feather white.

Europe, accidental in Greenland and Bermuda. Celebrated in song and story.

378. HORNED LARK.

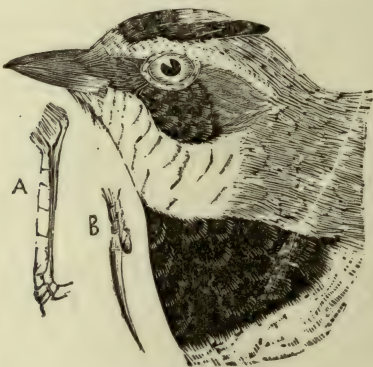
Size of last, 7.50; pinkish-brown above, white below; forehead, line over eye, and throat, black markings about head as in fig. 275; outer portion of tail showing white. Breeds in north-eastern N. A., Greenland, and northern parts of Old World; south in Oct. to winter, especially along coast from N. E. to Middle States, less commonly to S. C.; north in April. Nests on ground; eggs 4-5, gray-white spotted with yellow-brown. Song given when soaring in air. Spend most of time on ground, where they run about

very actively, squat for concealment, rise when alarmed and move with a flitting erratic flight; gregarious. Give a shrill double note when on the wing.

378. PRAIRIE HORNED LARK.

A little smaller than last and much paler above, nearly white about head, at

Fig. 275



Horned Lark.

best faintly yellow. Young, mottled black and buff. Breeds in Mass. quite to coast, N. H., Vt., N. Y. and west to Mississippi Valley. Rare in Mass. in winter; south in Oct. as far as S. C.; north in April.

379. HOYT HORNED LARK.

A little paler than Horned Lark; yellow of throat confined to middle line; over eye white. Breeds in British America from west shore of Hudson Bay to Arctic coast; south in winter to Mich., Kan., Utah and Nev.; casually to Ohio and N. Y.

Fig. 276



American Magpie. 1-10.

Magpies and Jays.

Large birds with bright colors; wings short and rounded; tails long, often rounded. Cries, harsh, seldom musical. Intelligent and active, somewhat gregarious, not migratory. Flight, heavy and direct. Nests in

trees of sticks; eggs, 4-5, gray or bluish, mottled with darker.

380. AMERICAN MAGPIE.

Large, 20, iridescent black; scapularies, inner webs of secondaries and abdomen, white, fig. 276; northern and western N. A.; casual east to Mich. and northern Ill.

Fig. 277



Blue Jay. 1-6.

381. BLUE JAY.

Smaller, 12; head crested, blue above, white beneath, black and white markings on wings; tail, and about head as in fig. 277. Eastern N. A. from Fla. northward to Canada. Abundant in woodlands and about

dwelling. With the harsh and well-known varied cries has a low song given in spring.

382. FLORIDA BLUE JAY.

A little smaller than last, and duller blue above. Fla. and Gulf coast to Tex.

Fig. 278



Florida Jay. 1-6.

383. FLORIDA JAY.

Size of last, tail proportionately longer; no crest; dull blue above; band of darker streakings on breast, fig. 278. Scrub lands of Fla. Gregarious; not shy. Cries and general habits, very jay-like.

384. CANADA JAY.

Size of last, tail rounded; gray, darker on hind head; yellowish on top of head and hind neck, fig. 279. Frequents heavily wooded sections from northern Mich., north

Fig. 279



Canada Jay. 1-8.

to Arctic America. Very unsuspicious. Cries, varied but jay-like.

385. LABRADOR JAY.

Differs from last in having black of top and sides of head more extended forward. Coast of Labrador and Newfoundland.

Titmice.

Small birds resembling Jays in form. Nests in holes of trees; eggs, 6-7, white spotted with reddish. Food, chiefly small insects and their eggs. Plumage, usually long and fluffy.

Fig. 280



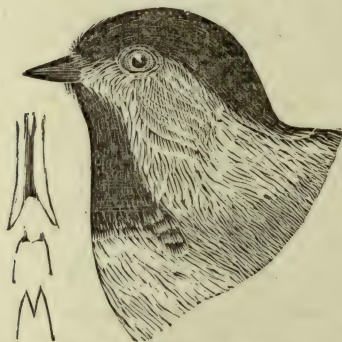
Black-capped Chickadee. 1-3.

386. BLACK-CAPPED CHICKADEE.

Small, 5.60, gray above; white beneath crown and throat, black; sides, reddish, especially in winter, figs. 280-281. Eastern N. A., north of Potomac and Ohio Valley. Note. *chick-a-dee-dee-dee*, given with energy, a short squeaking chip when disturbed and

other low conversational notes, a long drawn *cee-dee* (given at all seasons, and often mistaken for the notes of the Phoebe), and a low, silvery song seldom heard. Flight, wavering and unsteady. Nests, often placed in hole of decaying birches.

Fig. 281



Black-capped Chickadee.

CAROLINA CHICKADEE.

Smaller than last with line of demarkation between black and white of breast more sharply defined, fig. 282. Southern States from N. Y. southward. Sings silvery song more often than last.

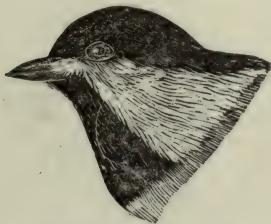
388. FLORIDA CHICKADEE.

Smaller and darker than last. Lake Ashby region Fla.

389. HUDSONIAN CHICKADEE.

Differs from Chickadee in having black on throat only and in being more rufous

Fig. 282



Carolina Chickadee.

on sides and above, fig. 283. Northern N. A. from shore of Hudson Bay northward.

390. ACADIAN CHICKADEE.

Similar to last, but smaller and browner above. South-eastern British Provinces and extreme north-eastern U. S., Me. mountains of N. H., Vt., and N. Y., wandering south in winter to southern N. E.

391. TOWNSEND CHICKADEE.

Similar to last, but much darker above and with no rufous on sides below, discovered in the summer of 1915 by Dr. Chas. W. Townsend in the wooded section of Labrador. Described in the Auk for Jan. 1916.

Fig. 283



Acadian Chickadee.

392. TUFTED TITMOUSE.

Larger, 6.00; gray above, white beneath; forehead, black; sides, reddish, fig. 284. Eastern U. S. from southern N. J. southward, casual as far north as southern N. E. Notes, similar to those of Chickadee, but harsher and louder; song, similar.

C R O W S .

Large birds; wings, long, folding nearly to tip of tail. All of our species are black. Cries, harsh. Nest, placed in trees or on cliffs; eggs, 3-6, grayish spotted with darker. Flight, strong and direct.

Fig. 284



Tufted Titmouse. 1-3.

393. AMERICAN CROW.

Medium, 20. N. A., excepting Fla., fig. 285. Notes, *caw*, repeated several times, more rapidly when alarmed; a series of croaks given quickly, and various guttural sounds; some individuals, at least, have quite a musical but low song; gregarious in winter.

394. FISH CROW.

Smaller, 16.. Atlantic and Gulf coasts from Conn. to La.; casual as far north as Mass. Notes, *ha-ha* and some guttural cries. Flight, rather more rapid than last with quicker wing-beats. Highly gregarious.

Fig. 285



Crow. 1-10.

This species in common with last gathers in large numbers at night to roost in some chosen swamp or woodland.

395. NORTHERN RAVEN.

Large, 24. Northern N. A., south to S. C. in unsettled and mountainous districts. Note, a harsh croak. Flight, heavy; sails much. Nests, often on cliffs.

396. STARLING.

Medium, 8; wings, long; tail, short, black, streaked and spotted with buff, fig. 286. Europe, now introduced into eastern and middle States, where it is common. Notes, various, whistles, chucklings and

Fig. 286



Starling. 1-4.

guttural sounds. Flight, not unlike that of Meadow Lark. Feeds much on ground. Nests, chiefly in holes.

O R I O L E S .

Variable in size and color; bill pointed. Eggs, usually bluish, lined with black.

397. MEADOW LARK.

Medium, 10.50; wings, long; tail, short, brown above, streaked with black; yellow beneath, black crescent on breast; outer tail feathers; white, fig. 287. Eastern U. S. from Canada to Fla.; winters, from Mass. south-

Fig. 287



Meadow Lark. 1-5.

ward; south in Oct., north in March. Call song, *you can't see me*; rather high and prolonged; a sharp chatter when alarmed; a song, clearly heard, often, possibly always, given on the wing, consisting of a sweet, continuous warble. Flight direct, wingbeats rapid with wings held low, sometimes

sails. Frequents open fields. Nests on grounds; eggs white, brown spotted.

398. FLORIDA MEADOW LARK.

Smaller than last, darker above and more yellow below. Fla. and Gulf coast to La. Call song, shorter and not as loud as in last, *see me here*, rather plaintively given. Occurs in open savannas and pine woods.

399. WESTERN MEADOW LARK.

Differs from Meadow Lark in being much paler. Western U. S. east to Ill. Sings true song while setting and when flying.

400. RED-WINGED BLACKBIRD.

Smaller, 9; black with red patch on wing, bordered below with buff. Female, smaller, streaked with brown and buff. Young male, like female, gradually assuming male dress, fig. 288. N. A. from Great Slave Lake to Fla.; winters from N. C. southward; south in Oct., north in March. Frequents open marshy sections; gregarious.

Nests, placed in bushes or on tursocks. Notes, a sharp chuck, a squealing cry, a chatter, given by both sexes, and the *oker-ree* song of male. Males and females do not associate, excepting to breed. Flight not direct, but erratic.

Fig. 288



Red-winged Blackbird.

401. FLORIDA RED-WING.

Differs from last in being smaller, buff margin on wing deeper; female, with rather more pinkish on throat. Fla. and Gulf coast to Tex. Song, shorter, like *cre-e-e*.

402. BAHAMA RED-WING.

Bill, longer than last; female, much paler. Many of the Bahama Islands; casual

in southern Fla. on the Keys (Ridgway). The song is considerably more shrill than that of our Red-wing and the alarm note is sharper or more squeaky. Frequent mangroves and sometimes scrub lands.

Fig. 289



Baltimore Oriole. 1-3.

403. NORTHERN REDWING.

Considerably larger than Fla. Redwing but like it in coloration, excepting female, which is much paler. Breeds in interior of British America, south in winter to Minn., Ia., western Ill., northern Ky.

404. TROPICAL.

9.50; black patch on wing, broad collar on hind neck, upper back, and beneath behind chest, orange; patch and stripings on wing, white. Northern S. A. introduced into Jamaica and other West Indies; accidental at Charleston, S. C. (Audubon). Songs, a series of loud clear whistles.

Fig. 290



Orchard Oriole. 1-3.

405. BALTIMORE ORIOLE.

Smaller, 7.70; orange; head, upper breast, back, wings, and band on tail, black, bar and streakings on wings, white, fig. 289. Female and young duller without black on tail. Breeds in eastern N. A. from

Va. to Canada; winters in Mex. and Central America; south in Sept.; north in May. Song loud, clear distinct whistles, but very variable, given full only in May and June; heard somewhat shortened in late Aug. and early Sept.; has a scolding chatter when

Fig. 291



Yellow-headed Blackbird. 1-6.

annoyed; young utter a monotonous piping when first out of nest in July. Nests in trees, woven and pendulous.

406. BULLOCK ORIOLE.

Differs from last in having orange of throat extending on cheeks, often over eye,

large patch of white on wings; tip of tail, black. Female differs in having broad wing patch like male. Western U. S., accidental in Me.

407. ORCHARD ORIOLE.

Smaller, 6.70; differs from Baltimore chiefly in having orange replaced by chest-

Fig. 292



Rusty Blackbird. 1-6.

nut and tail wholly black, fig. 290. Female green with whiter markings in a male. Young male like female, gradually assuming full male dress. Eastern U. S. from Fla. north to Mass. where it is rare. Winters in Mex.

and Central America; south in Sept.; north in May. Nests made of grass woven when green, then bleached. Song softer and rather more musical than in Baltimore.

408. YELLOW-HEADED BLACKBIRD.

Larger, 10.50; black; head, yellow; white patch on wing. Female, duller, no

Fig. 293



Brewer Blackbird.

white on wing. Young male like female, but has white on wing, fig. 291. Western U. S. east to Ill.; casual in Mass., Pa., Md., W. Va., District of Columbia, S. C. and Fla. Song a wheezy squeak. Largely resident.

409. RUSTY BLACKBIRD.

Smaller, 9.50; wings and tail, long, latter a little rounded; black throughout; iris, white, fig. 292. Female, gray; both tinged with rusty in autumn. Eastern N. A. from northern N. E. northward; winters, on Gulf coast; south in Sept; north in March; gregarious, often associating with Red-wings. Nests, in bushes.

410. BREWER BLACKBIRD.

Differs from last in having a thicker bill, fig. 293; head more iridescent, grayish in autumn. Female not as gray in summer.

411. BRONZED GRACKLE.

Larger, 12.50; tail, long and graduated; black; head glossed with green-blue, and sharply defined against bronze of back, fig. 294. Female, darker. Young, at first brown. Temperate N. A. east of Rockies, excepting regions occupied by next two. Winters in southern States, south in Nov.; north in March. Notes harsh and grating, not un-

like the creaking of a rusty hinge; alarm a rather soft *chat*. Gregarious at all times. Nests in communities on trees or bushes.

412. PURPLE GRACKLE.

Differs from last in having glossing of head more greenish and back less bronzy,

Fig. 294



Bronzed Grackle. 1-5.

and mixed with colors of head. Atlantic coast region east of Alleghanies from northern shore of L. I., Sound and lower Hudson Valley to Ga. Winter range and migration as in last. Flight steady and direct.

413. FLORIDA GRACKLE.

Differs from last in being smaller, in having head glossing violet-blue which tinting extends to wings and back. Fla. and Gulf coast to La.

Fig. 295



Boat-tailed Grackle. 1-6.

-414. BOAT-TAILED GRACKLE.

Large, 16, tail more strongly graduated, black, glossed with blue-green, fig. 295. Female smaller and red-brown, darker above. Young male, like female. South Atlantic

and Gulf coast of U. S. from Va. to Tex. Song, a series of sharp, loud notes, given rapidly as a kind of chatter, this is sometimes preceded by a single, more mellow note; also makes a shuffling sound which may be produced by wings, and a sharp

Fig. 296



Cowbird. 1-5.

croak when annoyed. When singing bows head, spreads wings and ruffles feathers. Occurs in open marshy places. Flight slow and very direct.

415. COWBIRD.

Smaller, 7.80; wings and tail, medium; black; head and neck, chocolate-brown, fig.

296. Female, gray-brown. Nestlings, both sexes similar to adult female, but moult at once into adult dress. Breeds from Ga. northward throughout temperate N. A.; winters in Mex. and southward; south in Oct., north

Fig. 297



Bobolink ♂ and ♀. 1-4.

in April. Flight swift and winding, especially when in pursuit of female. Gregarious in autumn, often alighting about cattle to feed upon locusts. Song, *sweet su-sie*, very sweetly given in a liquid tone, also a wheezy double croak given while the bird ruffles its

feathers and bows its head, also a prolonged whistling cry, usually emitted when flying, and a blackbird-like chirp. Deposits eggs in nests of other birds.

416. BOBOLINK.

7.50; wings, long; tail, medium, with feathers pointed. Spring male. black, buff

Fig. 298



Black-throated Bunting. 1-4

patch on back of head, and white markings above, fig. 297. Female, yellow-buff, streaked with black above and on sides (behind male). Male in autumn like female. Breeds from Middle States northward into British Pro-

vinces, west to Utah; winters in northern S. A., south in Sept., north in May. Frequents meadows and moist, grassy fields. Nests, on grounds. Food, seeds and insects. A well-known rollicking song, a blackbird-like chirp and a metallic clink when migrating. Flight, slow with down drooping wings and quick wing-beats. Gregarious when migrating, assembling in large flocks.

SPARROWS AND FINCHES.

Generally robust birds, with short, thick bills. A wide-spread family with numerous species.

417. BLACK-THROATED BUNTING.

Medium, 6.15; streaked above, unstreaked beneath; ash-yellow on back, white below, yellow on breast, black spot on throat. fig. 298. Female, duller. Breeds in U. S. between Alleghanies and Rockies, now rare in eastern section. Winters in Mex. and Central America. Nests in trees and bushes; eggs, 3-5. Song, a lisping twitter.

418. CHIPPING SPARROW.

Small, 5.50; tail slightly forked, streaked above, not below; crown red-brown in strong contrast to gray of neck above; gray beneath, black line through eye; bill, black, fig. 299. Young, streaked below and on crown,

Fig. 299



Chipping Sparrow. 1-3.

Breeds throughout eastern N. A. from Canada south to Gulf coast; winters in southern U. S.; south in Oct., north in April. Frequents open sections often near settlements, sometimes near houses. Song, a thin,

quickly given trill of double wirey notes; a low, rather sharp chirp of annoyance. Nest of fine rootlets lined with horse hair; eggs, 3-4, blue black-spotted.

Fig. 300



Tree Sparrow. 1-4.

419. TREE SPARROW.

Larger than last, 6.50; crown color not in strong contrast with black; sides of head plain gray, under mandible yellow; dark spot on breast; chestnut patch on side; white wing bands distinct, fig. 300. Breeds

in eastern N. A. from Labrador northward; winters from N. E. to S. C.; south in late Oct., north in late April. Frequents margins of woodlands and thickets, venturing into weed patches in winter. Song, a clear

Fig. 301



Field Sparrow. 1-3.

chant, beginning with two or three loud notes, falls to other lower notes and ends with a low, sweet warble; in autumn and winter gives a low murmuring warbling song. Nests in trees, eggs pale blue spotted with reddish.

420. FIELD SPARROW.

Smaller, 5.90; tail longer than in chip-pie, crown uniform in color with back, sides and beneath yellow-gray, bill red, fig. 301. Breeds in eastern N. A., north to southern British Provinces; winters in southern U. S., south in Oct., north in April. Frequents brushy on cedar-covered hill sides; song begins with two or three single notes, then continues with a constantly decreasing trill, which ascends, is a monotone, or descends; very sweetly given and appeals to all who love bird music. Nests usually in low bushes, sometimes on ground, of grass, etc.; eggs, pale blue, reddish spotted.

421. WESTERN FIELD SPARROW.

Differs from last in having wings and tail longer, grayer above, crown with median line; paler below. Western portions of Great Plains; south in winter to Tex., casually to eastern La.

422. CLAY-COLORED SPARROW.

5.65; crown, streaked; ear coverts, brown in contrast with buff of sides of head; buff-brown above, streaked with black; dull

Fig. 302



White-throated Sparrow. 1-3.

white beneath; bill, pale brown. Breeds on Great Plains from north-western Ill. west to Rockies; south in winter to Mex.; rare during migration in western Md. and Mich.

423. BREWER SPARROW.

Differs from last in absence of brown on side of head. Western U. S. in winter south to Mex.; accidental in Mass.

Fig. 303



White-crowned Sparrow. 1-3.

424. WHITE THROATED SPARROW.

Larger, 6.35; streaked above, not below, crown, black and white; distinct white wing-bands, red-brown above; white of throat in strong contrast with gray of

breast; yellow line over eye, white behind, fig. 302. Breeds in eastern N. A. from mountains of Mass. north to Hudson Bay; winters from Mass. (not commonly) south to Fla.; south in Oct., north in April. Frequents margins of woods and thickets near or on ground. Song, a series of prolonged, sweet whistles: *pea-body, pea-body, pea-body*, etc. Nests on ground; eggs, 4-5, pale blue, spotted.

425. WHITE-CROWNED SPARROW.

Large, 7; grayer above; no yellow about head, white of throat grading into gray of breast without strong contrast, head with three distinct white stripes, bill deep red, fig. 303. Breeds in eastern N. A. from northern N. E. northward through Labrador to southern Greenland; winters in Mex., south in Oct., north in May. Frequents open sections near thickets. Song, much shorter than in last and more quickly given.

426. GOLDEN-CROWNED SPARROW.

Differs from last in being grayer, especially on throat; median line on crown, yellow and wider. Breeds in northern

Fig. 304



Song Sparrow. 1-3.

Pacific Coast region, south in winter to Lower Cal., casual in Wis.

427. HARRIS SPARROW.

Larger than last; top of head and throat, black, and lower parts white. In-

terior plains of N. A., in winter south to Tex; in migration east to Wis. and. Ill.

428. SONG SPARROW.

Smaller, 6.46; wings, short; tail, long rounded, body streaked above and below; reddish above, white below where streaks accumulate to form spots on sides of jaw and center or breast, fig. 304. Breeds in Eastern N. A. from Va. north to Fur Countries; winters from Mass. to Fla.; south in Nov., north in March. Frequents open sections especially near water. Flight weak and erratic, seeks shelter in bushes. Song, variable, but typically begins with three notes, runs into a warble, ends with two notes, a summer variation is *be-e-e-e wretched*, the first portion being given slowly, the *wretched* rapidly with accent on the *ed*; alarm chirp soft.

429. LINCOLN SPARROW.

Smaller, 5.00, paler red above streakings finer, buff band across breast, fig. 305.

Fig. 305



Lincoln Sparrow.

Breeds throughout N. A. chiefly north of U. S.; winters in Panama, south in Oct., north in May. Not very common in N. E. Song, low, prolonged, varied, and pleasing. Frequents thickets, often near water.

Fig. 306



Swamp Sparrow. 1-3.

430. SWAMP SPARROW.

Size of last, top of head wholly red-brown, colors above, especially on wings, much richer; beneath gray across breast with faint streaking, fig. 306; winter and young, top of head streaked and markings below more distinct. Breeds in eastern

N. A. from Mass. north to Labrador and Newfoundland; winters from Middle States (occasionally from Mass.) to Fla.; south in Oct., north in April. Frequents swampy thickets which border large marshes. Song, an explosive, loud trill; in autumn a low murmuring warble. Nests on trassocks in open marshes.

431. FOX SPARROW.

Larger, 7.25, longer wings, tail a little rounded; yellow-red above. white beneath, heavily streaked on both surfaces with dark red-brown, spottings often as in Song Sparrow, fig. 307. Breed from islands in Gulf of St. Lawrence, northward to Arctic (rarely in northern Me); winters from Mass. to Fla., south in Oct., north in April. Frequents thickets, feeding on ground, scratches much among leaves, etc. Songs begins loud and clear with three double notes, ending with two, the last ascendent, *wil-lie, wil-lie, wil-lie work you*, one of the finest of our sparrow

songs. Nests, on ground; eggs, pale blue heavily spotted with red-brown.

432. RED-EYED TOWHEE.

Larger, 8, tail, long, wings short; above, lower neck and upper breast, black; sides, red-brown; tips of outer tail feathers, middle

Fig. 307



Fox Sparrow. 1-3.

parts beneath, and few makings on wing, white; iris, red, fig. 308. Breeds from southern British Provinces south to Gulf coast, winters from Middle States to Fla.; south in Oct., north in May. Frequents low growths; feeds on ground, scratching among

fallen leaves. Song, uttered when bird is perching high, like *drink your te-e-e-e*, first note accented, last prolonged, a loudly and sharply given *tow-hee* when annoyed (sometimes interpreted as *che-wink*). Nests on ground, eggs pale blue, thickly dotted with red brown.

Fig. 308



Red-eyed Towhee. 1-4.

433. WHITE-EYED TOWHEE.

A little smaller than last, less white on tail and wings, paler, especially on sides; song, shorter and more quickly given, alarm *jo-ree*. Florida.

434. ARCTIC TOWHEE.

Differs from last in being grayer above, paler on sides, more white on wings, and tail, streaks of white on sides of back. Great Plains to Rockies, casual in Wis.

435. GREEN-TAILED TOWHEE.

Wings and tail, olive green; crown, rufous; sides of head, ashy; throat, line on side of head, and malar streak, white; body, brown above, gray beneath. Rocky mountain distinct; accidental in Va.

436. JUNCO.

Smaller, 6.25; slate-gray, middle portions below and outer tail feathers, white; bill, pink, fig. 309. Young, streaked. Female, duller. Breeds from mountains of Penn., Mass. and N. Y. northward to Arctic coast; winters from Mass. to northern Fla., south in Oct., north in April. Nests on ground; eggs, pale blue, finely spotted with red-brown. Frequents thickets and margins

of woodlands. Song, a musical, tinkling trill; in winter and early spring, a low, more musical warble; note of annoyance, a sharp chirp, given double when much disturbed. Flight, rapid and darting, but somewhat erratic.

Fig. 309



Junco. 1-4.

437. CAROLINA JUNCO.

Differs from last in being larger, lighter above; young, more narrowly streaked. Breeds on higher portions of southern Alleghanies from Va. south to northern Ga.; in winter descends to surrounding low lands.

438. MONTANA JUNCO.

Differs from Junco in being a little smaller, brownish patch on back, sides and flanks. purplish cinnamon; grayer above. Breeds in Montana, etc.; winters from Ariz. to Tex., straggling eastward to Kan., Ill., Mass. and Md.

439. GRAY-HEADED JUNCO.

Differs from Junco in being uniform gray above; patch of cinnamon on back. Breeds in mountains of southern Wyo. Utah, Nev. and northern N. M.; winters in surrounding low lands and south to northern Mex.; accidental in Mich.

440. PINE WOOD SPARROW.

5.70; tail graduated; gray above, thickly streaked with chestnut; white below, buff on throat, breast and sides, unstreaked, fig. 310. Partly resident, but some migrate a little south. Southern Ga. and Fla. Frequents flat, grassy pine woods. Flight, low, fluttering and erratic, keeps much in

grass through which it runs nimbly and is quite difficult to start. Song, given when perching on lower limb of tree or on a stump, a prolonged, rather sweet trill, ending in the series of chirps or a harsh trill.

Fig. 310



Pine-woods Sparrow. 1-4.

441. BACHMAN SPARROW.

A little larger than last, more buffy above, streakings more rufous; clearer buff beneath. Breeds from S. C. northern Ga. and Gulf coast north to southern Va., southern Ind., and southern Ill.; south in winter to Fla.

Fig. 311



Grasshopper Sparrow. 1-4.

442. GRASSHOPPER SPARROW.

Smaller; wings, very short; tail, graduated; feathers, pointed. General tint, buff; crown with light central stripe; above streaked with rufous and black; line over eye to bill, yellow; unstreaked beneath; young and winter adults, obscurely streaked on breast, with rufous, fig. 311. Breeds in eastern U. S. from Middle States north to Mass. and southern Ont.; winters in Fla.; south in Sept., north in May. Nests placed on ground; eggs white, spotted with rufous. Frequents sandy fields, if grassy, thus local in distribution. Flight, fluttering and direct, runs nimbly through grass and is difficult to start. Song, given as bird perches on a slight elevation, a feeble, stridulating trill, inaudible a few yards away.

444. FLORIDA GRASSHOPPER
SPARROW.

Smaller than last, lighter in buffy tints, but darker above. Southern Fla.

444. HENSLOW SPARROW.

Size of last, but more slender; back and wings more rufous; head and neck above more greenish, distinct dusky streaks across breast and on sides; no yellow over eye, figs. 312 and 313. Breeds in eastern U. S.

Fig. 312



Henslow Sparrow.

from Middle States northward to Mass.; winters from southern range to middle Fla.; south in Sept., north in May, local in N. E. Frequents fresh marshy land in summer, grassy savannahs in winter. Flight much like two last. Song, a feeble *se-e-e wink*, the



Fig. 313.—Henslow Sparrow. 1-3.

first notes prolonged the last quickly giving and accented.

445. LECONTE SPARROW.

Size of last, but more slender, head and hind neck buff, latter streaked with chestnut; more buff beneath, fig. 314. Breeds in

Fig. 314



Leconte Sparrow.

prairie marshes of upper Mississippi Valley north into Canada; winters in southern States from S. C. to western Fla. Habits, similar to last.

446. SEASIDE SPARROW.

Larger, 5.50; gray above, slightly streaked with darker; line over eye, yellow;

white beneath, buff on breast, streaked here and on sides with gray; sides of head, gray, a black maxillary line, fig. 315. Salt marshes of Atlantic Coast of U. S., breeding from southern N. E. to Ga.; winters from N. C. south to Fla. Frequents tall grass of salt

Fig. 315



Seaside Sparrow. 1-3.

marshes which are submerged by the tide. Nests, on dry marshes, sometimes on ground, but often fastened to grass stems or placed in low bushes. Song, a low twitter, given as bird hovers low over the grass. Flight, low, direct with rapid wing-beats.

447. MACGILLIVARY SEASIDE
SPARROW.

Differs from last in being darker, back more distinctly streaked with black and streakings beneath broader. From Charleston, S. E. to eastern Fla.; breeding on Anastasia Island; in winter along Gulf coast to La.

448. SCOTT SEASIDE SPARROW.

Differs from last in having no prominent streakings above, grayer above, more streakings below often on throat. Breeds in western Fla. from Tarpon Springs to Cedar Keys. Song. four notes, the first two low and quickly uttered with a distinct articulation, the last two more connected, more prolonged with a decided accent, thus the song somewhat resembles that of a Red-winged Blackbird, and the bird spreads his wings, bows his head, and ruffles his feathers much as does the Red-wing; song given as bird sits low in grass.

449. FISHER SEASIDE SPARROW.

Differs from last in being much darker, more black above; breast and sides deep buffy. Breeds on coast of La.; in winter along west coast of Fla. to Tarpon Springs.

Fig. 316



Sharp-tailed Sparrow. 1-3.

450. DUSKY SEASIDE SPARROW.

Differs from last in being black above, white beneath broadly streaked with black, Merritt's Island, shore of Bannana and Indian Rivers north to Old Haulover Canal and about upper St. Johnis River, Fla. Fre-

quents dry marshes. Song and manner of singing like Seaside Sparrow.

451. SHARP-TAILED SPARROW.

Size of last, sides of head deep buff, enclosing a gray spot; paler buff elsewhere, streaked above on sides and across breast with black; top of head, dark-brown with a median line of buff, fig. 316. Breeds on Atlantic coast of U. S. from Mass. to northern Fla.; casually as far north as Mass., south in Oct., north in May. Frequents rather dry salt marshes. Song, a feeble twitter, given as bird hovers over grass.

452. NELSON SHARP-TAILED SPARROW.

Smaller than last, brighter in color, streaking narrower, but more sharply defined. Breeds on prairie marshes of Mississippi Valley from northern Ill. north to Manitoba; winters along Gulf coast from S. C. to Tex., regular during migration in Oct. on coast of Mass.

453. ACADIAN SHARP-TAILED
SPARROW.

Differs from last in being larger, paler and in having indistinct streakings, especially below. Breeds on Atlantic coast of British Provinces from north of St. Lawrence southward, occasionally to coast of Me.

Fig. 317



Savannah Sparrow. 1-3.

454. SAVANNAH SPARROW.

Wings, long; tail, short and square, 5.75; gray above, white beneath, streaked everywhere with sharply defined black lines; line from bill over eye, yellow, crown with central line, fig. 317. Eastern N. A., breeding from Middle States north to Hudson Bay, more commonly in N. E. (excepting in Connecticut Valley) on coast. Winters, from

Carolinas to Fla.; casually north to Mass., south in Oct., north in April. Flight, swift and darting, never takes refuge in a thicket, runs nimbly through grass where it hides. Song, a series of feeble grasshopper-like notes, followed by a low warble given as the bird perches at a not high elevation.

Fig. 318



Vesper Sparrow. 1-4.

455. IPSWICH SPARROW.

Larger than last, 6.25, and much paler, about sand-color, streakings not well defined. Breeds on Sable Island off Nova Scotia; winters south to N. J., casually to Ga.; south in Oct., north in April. Frequents sand dunes on coast.

456. VESPER SPARROW.

Size of last, gray above, white below, streaked on back, crown (where there is no dividing line) upper breast and front part of sides with black, sides of head with two dark lines; outer tail feathers, white, fig. 318. Breeds in eastern U. S. from Middle

Fig. 319



Lark Sparrow. 1-4.

States north to southern Canada; winters from N. C., rarely from Mass. to Fla.; south in Oct., north in April. Frequents open fields and pastures where there is scanty herbage; nests in such places on ground, eggs, 4-5, gray blotched and lined with darker. Runs much on ground; unsuspicious. Song, given at an elevation, two short notes fol-

lowed by a pleasing warble, ending with three detached notes.

457. LARK SPARROW.

Medium, 6.50; tail, rounded and white tipped, brown above, heavily streaked with black; white beneath, with a black spot on breast; crown, chestnut, central line of

Fig. 320



Lark Bunting. 1-3.

white; checks, chestnut, black markings as in fig. 319. Breeds in northern Mississippi Valley, south in winter to Gulf coast, eastward rarely to Atlantic States north to Mass. Frequents open fields and cultivated lands, often in vicinity of houses. Song, rich and clear, consisting of a series of liquid notes freely intersperced with trills.

458. LARK BUNTING.

Smaller, 6.00, black; large white patch on wing and tip of tail, white, fig. 320. Female, winter male and young, brown above; white beneath, streaked with black; wings and tail as in adult male in spring. Great Plains from Kansas north to Manitoba;

Fig. 321



Snow Bunting. 1-4.

winters, south to Mex., accidental in migration in N. Y., Mass. and S. C.

459. SNOW BUNTING.

Larger, 6.65; wings, very long and pointed; white; back, middle wing and tail, black; in winter, and young tinged with rufous, especially on head; bill, orange; fig.

321. Breeds in Arctic and Sub-Arctic from northern Labrador northward; migrating south regularly to N. E. and more rarely to Ga.; south in Oct., north in April. Gregarious in winter, frequenting sand and dunes of coast and open fields in interior. Flight, strong, swift, but erratic, a flock resembling

Fig. 322



Lapland Longspur. 1-4.

dried leaves drifting before a high wind; restless, often flying from place to place. Song, a sweet warble, given when hovering, not often heard off breeding grounds. In winter, a sweet single or double note, less often a quite melodious trill and a kind of chirring sound, all given on wing.

LAPLAND LONGSPUR.

Smaller, 6; brown above, streaked with lighter; a distinct chestnut collar, pale buff beneath; throat and spots on side, black; outer tail feathers with terminal spot of white, fig. 322. Female and young have markings duller and less well defined. Breeds in Arctic and Sub-Arctic districts of Europe, Greenland and northeastern N. A. Winters from N. E. south to S. C.; common in N. E. from middle Oct. to Dec.; less common in winter; rare in spring. Song, on breeding ground, a rollicking joyous melody, given when hovering; in autumn and winter a single or double note a little sharper than that of Snow Bunting. Associates with Horned Larks and Snow Buntings or gathers in small flocks by itself in similar places.

461. SMITH LONGSPUR.

Differs from last in having outer tail feathers white, entire lower parts deep buff, crown and sides of head, black; stripes on

head and middle bar, white. Breeds on interior plains of N. A. from Great Slave Lake north to Arctic coast; south in winter to Texas, east regularly to Ill. and northwestern Ind., casually to S. C.

Fig. 323



Purple Finch. 1-4.

452. CHESTNUT-COLLARED LONGSPUR.

Differs from Lapland Longspur in having top of head, spot on ear covert, and beneath, black; throat, broad-stripe over eye, and wing-band, white. Breeds on

Great Plains of N. A. from Kansas north to Saskatchewan; south in winter to Mex. and casually east to coast of N. E. and Long Island. Song, short, shrill, and sweet, usually given in flight.

463. MCCOWN LONGSPUR.

Size of last, tail shorter, flight undulating, white beneath; front of crown, crescent on breast, black; gray above, broadly streaked with black; outer portion of tail, white, broadly tipped with black. Female, without black on head or breast; buffy beneath. Breeding range and southward migration much as in Smith Longspur; casual east to Ill.

464. PURPLE FINCH.

Small, 6; wings, long; tail, forked; bill, short and thick, brown; crimson-lake obscurely streaked with darker on breast, fig. 323. Female and young, brown above, white below, heavily streaked with dusky; a prominent white line over eye; adult male

dress not assumed the first year. Eastern N. A.; breeds from Penn. north to Hudson Bay; winters from Mass. to Fla. Frequents open country. Nests, in cedar trees; eggs, blue, spotted with black. Song also given

Fig. 324



Canadian Pine Grosbeak. 1-5.

by young male and, at least occasionally, by female, a continuous warble; sometimes given more rapidly and musically as bird ascend in air and descend; a low whispered melody given in concealment; alarm, a sharp chirp. Flight, direct, undulating with a

characteristic quiver of wings. In perching sits upright.

465. CANADIAN PINE GROSBEEK.

Larger, 8; wings, long; tail, forked; rosy-red; back, obscurely spotted with dusky; two white wing-bands, fig. 324. Female, gray; top of head and rump, bronzy-yellow. Young male similar to female, but more or less red, depending on age. Breeds in northeastern N. A. from New Brunswick north to limit of coniferous forests, wandering south when cone seed and ash seed crops fail to N. J., northern Ohio, Ind. and Ill.; casually further south. Occurs with us wherever it can find food, which consists of cone seeds, cedar berries, mountain and common ash seeds. Very unsuspicious. Song, a low, continuous warble, and a loud, clear double call note. Flight, swift and undulating. Gregarious in winter.

466. REDPOLL.

Small, 5; wings, long and pointed; tail, long and forked, brown above; crown crim-

son, rosy beneath; black spot on throat. Females and young without the rosy on breast, fig. 325. Northern part of northern Hemisphere, breeding from Gulf of St. Lawrence northward; south irregularly when

Fig. 325



Redpoll.

food fails in north to northern U. S., rarely to Va. and northern Ala.; south in Nov., north in April. Song, a sweet, melodious warble; a call which is similar to that of the Goldfinch, but not so clear, and a kind of chatter when flying. Flight, undulatory

467. HOLBOELL REDPOLL.

Differs from last only in being larger. Extreme northern portions of Europe, Asia and N. A., wandering south in winter, rarely as far as Mass., northern Ind. and Mich.

468. GREATER REDPOLL.

Size of last; streakings broader; rosy less extended. Resident in Greenland wandering south in winter, irregularly and at wide intervals as far as Mass. (where sometimes common), N. Y., Mich., northern Ind., and northern Ill.

469. GREENLAND REDPOLL.

Size of last, very pale; rump, white, unstreaked. Resident in Greenland, Iceland, and Spitzbergen, wandering in winter irregularly to Hudson Bay and casually to Ontario.

470. HOARY REDPOLL.

Differs from last in being smaller, bill very short. Circumpolar-continental dis-

tricts; irregularly south in winter to northern U. S., Mass. (rare), Mich. and Ill. All Redpolls frequent open country and are gregarious.

Fig. 326



Pine Siskin. 1-4.

471. BREWSTER LINNET.

Like an immature female Redpoll, but has no red on crown; primaries and tail feathers edged with pale yellow; rump, tinged with yellow. Known only from the type specimen taken at Waltham, Mass., Nov. 1, 1870.

472. PINE SISKIN.

5.25, bill longer, white streaked with black; small patch on wing and base of tail, yellow, fig. 326. Breeds in the mountains of N. C., Penn. and N. E., and north through coniferous forests into Canada; south in winter, irregularly into U. S., sometimes as far as the Gulf of Mexico. Notes, harsher than those of Goldfinch, but similar. Frequent open sections and birch woods.

473. AMERICAN GOLDFINCH.

Larger, 5.60; lemon yellow; top of head, wings and tail, black; two white wing-bands, fig. 327. Female and winter male, green-brown above, white below, wing feathers tipped with white. Breeds in U. S. east of Rockies, north into southern Canada; southward along mountains to Ga.; winters from Mass. to Fla. Frequent open country; gregarious in winter. Song, a continuous warble, very sweet, sometimes given as the bird flies in circles, call a plaintive, *per*

Fig. 327



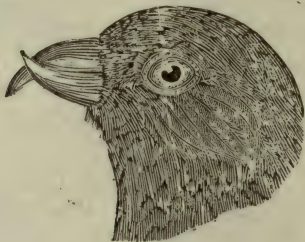
American Goldfinch. 1-4.

chick-er-ry, given when rising in its undulating flight. Nests often in willows or ornamental trees; eggs, pale blue, unspotted; breeds late in June.

474. GOLDFINCH.

Brown above and on breast, white elsewhere beneath. Face crimson, behind which

Fig. 328



American Crossbill.

is a white space, then the remainder of the head is black. Wings and tail, black, the former with a large patch of yellow. Europe; introduced into north eastern U. S., now occurring regularly near N. Y. City and

at Cincinnati, Ohio. Occurs occasionally in Conn. and Mass.

475. AMERICAN CROSSBILL.

Larger, 6; wings, long; tail, short, forked; bill crossed at tip; dull red, wings and tail dusky. Female and young male

Fig. 329



White-winged Crossbill. 1-3.

gray-green, yellow on top of head, from this male gradually assumes adult dress, fig. 328. Breeds in northern and eastern N. A. from mountains of northern parts of Canada, but irregularly as to season and locality; in winter, wandering about irregularly accord-

ing to food supply. Flight, steady, swift and undulating; gregarious. Song, a low, sweet warble; call loud and clear, also gives a murmuring chatter when feeding. Very unsuspicious.

Fig. 330



Evening Grosbeak. 1-4.

476. WHITE-WINGED CROSSBILL.

Differs from last in being more slender, bill not as stout; crimson; wings and tail, black, the former with a conspicuous patch of white, fig. 329. Female and young male, rump yellow; wing-patch as in male. Breeds in coniferous forests of northern N. A. from

islands in Gulf of St. Lawrence, northern Me., N. H., N. Y. and Mich.; irregularly south in winter to District of Columbia, southern Ohio, central Ind. and southern Ill. Habits, song, etc., much as in last.

Fig. 331



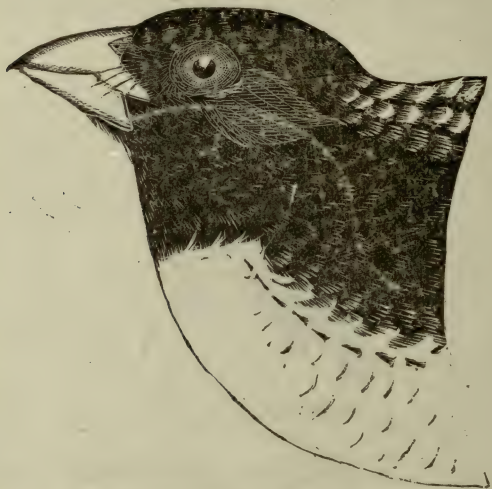
Rose-breasted Grosbeak, ♂.

477. EVENING GROSBEAK.

Larger, 7.60; bill, large, yellow; wings, long; tail, short, emarginate; black, forehead, broad line over eye and posterior portion of body, yellow; large white patch on wing, fig. 330. Interior of N. A. east

of Rockies, wandering east irregularly south to Kan., east to N. E. Call note, loud and frequently given; song, short and not very pleasing.

Fig. 332



Rose-breasted Grosbeak, ♀. 1-4.

478. ROSE-BREASTED GROSBEEK.

Larger, 7.75; bill, large, white; wings, long; tail, medium, square; head and above, black; bands and spot on wing, spots on

outer tail feathers; rump and beneath, white, figs. 331, 332; triangular patch on breast and underwing coverts, rose. Female brown above, white below, black streaked; median line on crown and one over eye, white; underwing coverts, saffron yellow,

Fig. 333



Rose-breasted Grosbeak, ♀.

fig. 333. Breeds in eastern N. A. from Middle States to southern British possessions, along Alleghenies to N. C.; winters in Central America and northern S. A.; south in Sept., north in May. Frequents woodland, groves and orchards. Song, rich, clear and

varied, the notes flowing together, given sometimes on the wing; alarm, a metallic *click*. Flight, swift and undulating. Nests, frail structures placed in trees and bushes; eggs, blue, spotted with rufous.

Fig. 334



Cardinal Grosbeak. 1-5.

479. BLACK-HEADED GROSBEAK.

Differs from last in having line behind eye; collar on neck and lower parts, cinnamon-buff; no rose color anywhere. Female, differs from last in being generally tinged

with buff. Western U. S. from Mex. to British Columbia; accidental in Mich.

480. CARDINAL GROSBEAK.

Longer, 8.50; wings, short; tail, long; head, crested; vermillion red; line surrounding bill and throat, black, fig. 334. Female duller, yellow-gray above and yellow-buff beneath. Eastern U. S. from Gulf States, excepting Fla., north to N. Y., including Long Island. Resident. Frequents thickets, margins of swamps and woodlands, Song, loud, clear and very melodious: *whe-e-e*, repeated six times, liquid and clear; *quit-er*, quickly given five or six times; *wheat*, a little prolonged and exceedingly sweet and clear, also given six times. Sings at almost all seasons. Alarm, a sharp chirp. Nests in tree and bushes, eggs gray, spotted with yellow brown.

481. FLORIDA CARDINAL.

Differs from last in being smaller, darker above and deeper red beneath. Female, deeper buff. Fla.

482. BLUE GROSBEAK.

Smaller, 7; wings and tail, long; deep blue; wing-bands, tawny, fig. 335. Female and young, reddish-brown, paler beneath. Breeds in southern portions of eastern U. S. from N. J. and Penn. southward. Winters

Fig. 335



Blue Grosbeak.

in Yucatan and Cuba. Song, low, but sweet; alarm, a rather loud chirp. Frequents open sections, or among scattering trees.

483. INDIGO BIRD.

Smaller, 5, green-blue, fig. 336. Female brown throughout; both sexes have the under bill blue with a line of black from

tips to base. Eastern U. S. north to British Provinces; winters, in Central America; south in Oct., north in May. Nest placed in low bushes; eggs, pale blue. Song, given when perching high, a rather harsh unmusical warble divided into two parts, uttered with energy, ending abruptly, heard until middle of Aug.; alarm, a sharp chirp.

Fig. 336



Indigo Bird.

484. PAINTED BUNTING.

Size of last; head, purplish-blue; back, green; rump, upper tail coverts and beneath, red. Female, yellow-green paler beneath. Southern U. S. from southern Fla., Ill. and N. C. to Fla.; winters, from southern Fla. to Central America; south in Sept., north

in March. Frequents thickets in the concealment of which the exceedingly sweet song is given.

485. VARIED BUNTING.

Differs from last in being varied with purple, blue, and red; hind part of head

Fig. 337



Bahama Grassquit. 1-2.

and neck, vermillion; beneath, dull purple; reddish patch on throat. Female, gray-brown; white on throat.

486. BAHAMA GRASSQUIT.

Small 4, wings short and rounded; tail short; black on head, neck and anterior por-

tions of body; gray-green elsewhere, fig. 337. Female, sometimes like male, but usually duller with little or no black. Bahamas; accidental in Fla. Frequents settlements, nesting about houses, but also occurs in unsettled sections. Song, begins with two or three liquid notes, given in a

Fig. 338



Bahama Bananaquit. 1-3.

clear, bell-like tone, followed by a series of lisping notes.

487. MELODIOUS GRASSQUIT.

Differs from last in being more greenish above, darker below, line back of eye and tuft of elongated feathers on side of neck,

yellow. Female, with back of head replaced by chestnut; yellow duller. Cuba; accidental on Sombrero Key, Fla.

HONEY CREEPERS.

Small birds, with long wings, short tails; curved and sharply pointed bills.

Fig. 339



Black and White Warbler. 1-3.

488. BAHAMA BANANAQUIT.

4.50; black above; line over eye, patch on wing, tip of tail and beneath, white; patch on breast and rump, bright yellow, fig. 338. Bahamas; casual in southern Fla.

Frequents woodlands; food, chiefly or wholly fruit and the sweet of flowers. Flight, strong, direct and darting. Song, a series of low, cackling notes. Nests, in trees, domed but irregular in form.

A M E R I C A N W A R B L E R S .

Small birds, less than six inches long, confined to the continent of America and adjacent islands. Food, chiefly insects. Eggs, white or greenish, spotted with brown of varying shades.

489. B L A C K A N D W H I T E W A R B L E R .

Medium, 5.25, black and white in stripes, crown divided by a white line; bill and wings, long, fig. 339; female duller. Breeds in eastern N. A. from Va. north to Hudson Bay; winters, from Gulf States, Bahamas and West Indies to northern S. A.; south in Sept., north in late April. Frequents open woodlands, creeping with a sideling jerky motion about trees. Song, a sharp *we-see*, given five or six times, a

longer, louder lay, much like the ordinary song of the Nashville Warbler. Nest, on ground near base of tree, clump of bushes, or rock.

Fig. 340



Yellow-throated Warbler. 1-3.

490. YELLOW-THROATED WARBLER.

Size of last; throat, yellow; otherwise white below; slate blue above; black markings on head and sides as in fig. 340; line from bill over eye, yellow in front, white behind; tail spots and two wing-bands, white. Breeds in Atlantic coast district from Fla. north to Va., casually to N. Y.,

Conn. and Mass.; north in March, south in Aug. and Sept. Occurs in open woodlands, usually in tree tops. Song, a short, low warble.

491. SYCAMORE WARBLER.

Smaller than last, line over eye with little or no yellow. Mississippi Valley, north to southern Mich., east to Ohio and casually to S. C. in migration.

492. BLACK-THROATED BLUE WARBLER.

Size of last, blue above, white beneath, spot on wing and spots on tail white, fig. 341. Female, green-brown above, lighter below; white wing spot present. Breeds from mountains of Penn. east to western Mass. through Worcester Co.; north to Hudson Bay; winters in Bahamas, West Indies and north eastern S. A.; south in Sept., north in May. Song, a short rather

weak zeeping lisp. Occurs often in swampy thickets.

493. CAIRN WARBLER.

Differs from last in having more or less black on back. Higher mountains of Penn. and N. C.

Fig. 341



Black-throated Blue Warbler. 1-3.

494. MYRTLE WARBLER.

Larger, 5.50, slate-blue above, white beneath, four yellow patches: one on crown, one on rump and one on each side, black markings as in fig. 342; wing bands and tail spots present, latter small. Female and

young, brownish above and somewhat buffy beneath; duller. Breeds from mountains of western Mass. and in about same latitude west to Rockies, north to Labrador; winters from southern coast of Me. and southern Ind. to Bahamas, West Indies and Central America; south in Sept. and Oct., when

Fig. 342



Myrtle Warbler. 1-4.

abundant, found everywhere; north in April. Song, a low warble of four or five notes; alarm, a loud flat chirp. Feeds much on fruit of bayberry.

495. AUDUBON WARBLER.

Differs from last in having throat yellow and less black on side of head.

Western N. A.; accidental in Mass. and Penn.

496. CAPE MAY WARBLER.

Small, 5; cheeks, chestnut; yellow below and on rump; much black above and streakings below as in fig. 343; large wing

Fig. 343



Cape May Warbler. 1-3.

patch and tail spots, white. Female and young, grayer with two wing bands, streakings beneath, indistinct. Breeds from northern N. E., northern Mich., north to Hudson Bay; winters in Bahamas, West Indies and Key West, Fla.; north in May, south in

Sept. Frequents woodlands and orchards.
Song, low, lively and pleasing.

497. MAGNOLIA WARBLER.

Size of last, band of black spots crossing breast having pendants extending along sides; top of head, slate-blue; back,

Fig. 344



Magnolia Warbler. 1-3.

black; beneath and rump, yellow, fig. 344. Female and young, duller, but in common with male have a band of white spots crossing middle of tail. Breeds from mountains of western Mass. west to Mich., north to Hudson Bay. Winters in Mex. and Central America; south in Sept., north in May.

Song, a short, pleasing rather broken warble. Frequents woodlands and thickets.

498. CERULEAN WARBLER.

Small, 4.50, bright blue above, white beneath with a more or less distinct bluish

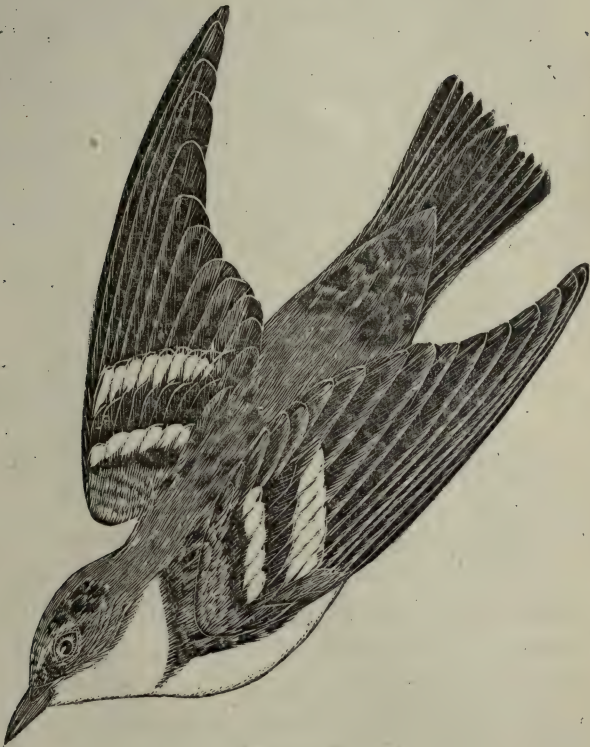
Fig. 345



Cerulean Warbler. 1-6.

band across breast; wing-bands and tail spots, white, figs. 345 and 346. Female, green-blue above, yellow-green beneath. Breeds from Ohio River Valley north to southern Mich., east to western N. Y., rare east of Alleghaneis; casual in southern

Fig. 346



Cerulean Warbler. 1-6.

N. E.; winters, chiefly in U. S.; south in Aug., north in April. Song, a guttural trill. Occurs in low woodlands.

499. CHESTNUT-SIDED WARBLER.

Larger, 5, white beneath, broadly streaked with chestnut on sides; crown, yellow; green above; patch on side of head

Fig. 347



Chestnut-sided Warbler. 1-3.

and streaks on back, black, fig. 347 and 348 upper fig. Female, duller; young, without chestnut on sides, but in adult and young the wing-bands are always pale-green. Breeds throughout N. E., N. Y., and Penn., north to Ontario, less commonly west to Ind. and Ill.; winters from Guatemala to Panama, south in Aug. and Sept., north in May. Fre-

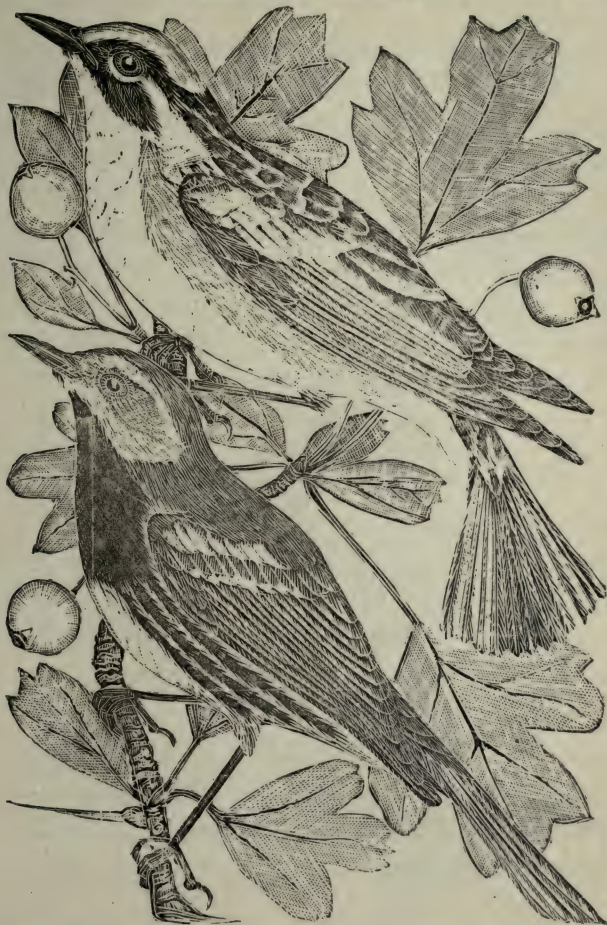


Fig. 348. Upper, Chestnut-sided Warbler; lower, Black-throated Green Warbler.

quents brushy fields, especially if moist. Usual song: *sweet, sweet, sweet . . . to-weeche*, with a short pause before the two terminal syllables, which are given with a rising inflection; another not unusual song is a rather disconnected lay not unlike that of the

Fig. 349



Black-pollied Warbler. 1-3.

Canadian Warbler: another not usual is one similar to that of the Nashville Warbler.

500. BLACK-POLLED WARBLER.

Larger, 5.50; black and white in stripes; crown, solid black; white wing bands and tail, spots, fig. 349. Female, autumnal

male and young, green above and pale green beneath, streaked above and on breast with black; wing-bands often pale green; under tail coverts, white. Breeds from extreme northern N. E. and northern Mich. to Hudson Bay; winters in northern S. A.; north in May, south in Sept. and Oct. Frequents orchards and low growths of woodlands. Song, a weak *zip*, given four or five times very quickly; occasionally heard in autumn.

501. BAY-BREASTED WARBLER.

Size of last; crown, throat and sides, red-brown or bay; sides of head and forehead, black; white wing bands and tail spots; beneath, buff, fig. 350. Female, autumnal male and young, like same plumages in Blackpoll, but if not showing some trace of bay, always differ in having under tail coverts buff. Breeds from northern N.E. and Mich. to Hudson Bay; winters in northern S. A., south in Sept. and Oct., north in

May. Occurs in evergreen woods. Song begins with a series of lisping notes and ends with a short warble.

502. BLACKBURNIAN WARBLER.

Smaller, 4.80; throat. upper breast, spot on top of head and behind ear coverts,

Fig. 350



Bay-breasted Warbler. 1-3.

and line over eye, bright orange; above and streaks on sides, black; wing bands and tail spots, white, fig. 351. Female, duller. Breeds from southern Alleghanies and Mich. north through mountains of western Mass. to Labrador; winters in north-western S. A.;

south in Sept., north in May. Frequent evergreens, and sometimes other woodlands. Song, a series of double notes like *jullup, jullup, jullup*, becoming a little squeaky as they advance, and terminate in an ascending scale.

Fig. 351



Blackburnian Warbler. 1-3.

503. BLACK-THROATED GREEN WARBLER.

Larger, 5, cheeks and forehead, yellow; green above, white beneath; throat and streaks on sides, black; large tail spots and

wing-bands, white, figs. 348 lower and 352. Female, with throat more or less yellow, thus encroaching on black patch. Young, with little black on breast. Breeds in eastern N. A. from Conn. and southern Ill., north to Hudson Bay and south along

Fig. 352



Black-throated Green Warbler. 1-3.

Alleghanies to S. C.; winters in Central America; south in Sept., north in May. Occurs in evergreen forests, but less so in pitch pines. Song of five or six notes, *Good Saint The-re-sa*, given with a rising inflection and with a decided accent on last

syllable; another song, usually late in summer, is *trees, trees, mur-mur-ing trees*, there are also other variations but all are given with a buzzy intonation that always characterizes the species.

Fig. 353



Kirtland Warbler. 1-3.

504. TOWNSEND WARBLER.

Differs from last in having top of head and cheeks black, and in being distinctly yellow below black breast patch. Breeds in western N. A.; winters in Central America; south in Sept., north in May, accidental in Pa.

505. KIRTLAND WARBLER.

Large, 5.50, slaty above, yellow beneath; patch on side of head, spots on breast and sides, black, fig. 353; female, duller. Breeds in Mich. Nests placed on ground. Winters

Fig. 354



Pine Warbler. 1-3.

in Bahamas; south in Sept., north in May. Frequents low bushes in fields; moves tail up and down, gives a sharp note of alarm song, *ch-ch-che-che-a* or *che-che-che-chee wiche-a-a*, with the terminal *a* prolonged in both. (Norman A. Wood). Rare.

506. PINE WARBLER.

Size of last, yellow-green above, green-yellow below to lower breast, then white to end of tail coverts; two wing-bands and tail spots, white; faint dark streakings on breast, fig. 354. Female, gray above, dull white beneath. Breeds in eastern U. S. from northern Fla., north to New Brunswick; winters from N. C. (occasionally as far north as Mass.) to Fla. South in Sept. and Oct., north in April. Frequents pitch pine woods, less common everywhere. Song, a musical trill of about six notes, sometimes followed by a short warble, sometimes the warble is given alone; sings often in Sept. Song something like that of Chipping Sparrow, but notes of trill are single, more musical, and have more volume. Double brooded, nesting in May and June.

507. FLORIDA PINE WARBLER.

Larger than last, and decidedly golden yellow above and below, which is more ex-

tended along flanks. Female about as bright as male. Breeds in Peninsula Fla.

508. PALM WARBLER.

Smaller, 5.25; brown above; rump, throat and under tail-coverts, yellow; remaining lower portions, white; crown and streaks, chestnut; wing bands and tail spots,

Fig. 355



Palm Warbler. 1-3.

white, fig. 355. Young, with no chestnut on crown and streaked with dusky below on dull white ground; under tail coverts, always yellow. Breeds in interior of British America west of Hudson Bay; winters from N. C., south through Fla., Bahamas, and many of the West Indies; uncommon during

fall migration north of N. C., east of Alleghanies and in N. E. Frequents open sections, feeding much on ground. Raises and lowers tail. Alarm, a sharp chirp; song, a feeble trill. Nest placed on ground.

Fig. 356



Prairie Warbler. 1-3.

509. YELLOW PALM WARBLER.

Larger than last, and yellow beneath in all stages. Breeds from northern N. E. north to eastern shore of Hudson Bay; winters from N. C. to southern Fla.; south in Sept., north in April. Common.

510. PRAIRIE WARBLER.

Smaller, 5; golden yellow above, yellow beneath and on line over eye; line through eye, spots from base of bill along sides, black; spots on middle of back, chestnut;

Fig. 357



Yellow Warbler. 1-3.

two yellow wing bands; white tail spots, large, fig. 356. Female, duller. Breeds from northern Fla. to Mass. (where it occurs chiefly along coast area); also more rarely west to Ill., Ind., and southern Mich.; winters

in Bahamas and West Indies; south in Aug., north in May. Frequents scrub lands. Song, a rather harsh trill of about six notes given in an ascending scale. Raises and lowers tail.

511. YELLOW WARBLER.

Size of last. Golden yellow above; clear yellow beneath, streaked on sides and breast with rufous; no wing bands, nor tail spots, but feathers of wings and tail margined internally with yellow, fig. 357. Female duller with few spots beneath. Young, with no streaks. Breeds throughout eastern N.A. from northern Ga. to Barren Ground and far West. Winters in northern S. A.; south in Aug., north in April and May. Frequents open sections in the vicinity of thickets. Song, a lively warble, consisting of about six notes, *sweet sweet sweet* to *sweet-tee*. Differs from that of Chestnut-sided in not having a pause before last two notes and these are not accented.

Fig. 358



Northern Parula Warbler, ♂ and ♀.

512. PARULA WARBLER.

Small, 4.75, blue above and on side of head; throat and breast, yellow, the latter with a band of blue and chestnut. Female, duller. Breeds from Va. southward to Gulf States; winters in Fla., south in Aug. and Sept., north in April and May. Frequents woodlands and builds its nest in "Spanish Moss." Very active.

513. NORTHERN PARULA
WARBLER.

Differs from last in being larger, darker, more chestnut below, especially on sides, fig. 358. Breeds from Va. north to Canada, but confined to those places where the long usnea grows for in it the birds nest. Occurs everywhere in migration. Song, a vehemently uttered, *swee swee swee swee swee swee-zee*, the last two syllables being given quickly, the last ascending; these are sometimes omitted.

Fig. 359



Golden-winged Warbler, ♂ and ♀.

514. WESTERN PARULA WARBLER.

Smaller than Parula, but color as in last. Breeds in Mich. and Minn. south to Gulf. This and last winter in Bahamas and West Indies.

515. GOLDEN-WINGED WARBLER.

Larger, 5; ash-blue above; line over eye and below, white; throat and broad patch on side of head, black; patch on wing (sometimes two bands), and crown, yellow. Female, duller, fig. 359. Breeds from Mass. west to Mich. South to Conn. and N. J. along mountains to Ga. Frequents low growths and is local. Song, a rather drawling *zee*, repeated from four to six times and a guttural warble seldom heard; alarm, sharp.

516. BREWSTER WARBLER.

Differs from last in the absence of black throat patch and in having a very narrow black line through eye, fig. 360. Female with throat white or dusky, always with

Fig. 360



Brewster Warbler. ♂.

narrow black line through eye, fig. 361. Breeds in Mass., Conn., N. Y., Penn., N. J., Md. and Va.; winter range unknown. Song averaging shorter and more quickly given than in last.

517. LAWRENCE WARBLER.

Differ from Golden-wing in having sides of head and lower part yellow, but the line through eye is narrow as in last; wing-bands, white; back, green as in next, fig. 362. Breeds in N. Y. and Conn.; winter range unknown.

518. BLUE-WINGED WARBLER.

Size of last. Greenish above, below and crown yellow; wings bluish, wing-bands white, narrow black line through eye, fig. 363. Female, duller. Breeds from Conn. west to Mich., rare in Mass., but is local; winters in Mex. and Central America; south in Aug. and Sept; north in May. Song, a wiry, lisping trill.

Fig. 361



Brewster Warbler, ♀ and young.

519. BACHMAN WARBLER.

Smaller, 4.25; olive-green above, yellow beneath and on forehead; breast, patch on crown and on throat, black, a little white on outer tail feathers; no wing-band. Female, much duller, plain gray below, slightly yellow on crown. Breeds in N. C., S. C., and Mo.; casually in Va. and Ark.; winters in Cuba, north in March, south in Aug. Rare.

520. ORANGE-CROWNED WARBLER.

Larger, 5; gray-olive above, yellow-gray beneath, nearly concealed orange spot on crown, fig. 364. Female and young, duller. Occurs in woodlands. Song, a low sweet trill. Breeds from Manitoba north to Alaska; winters sparingly from S. C. to Key West, Fla., more commonly in Mex.; south in Sept. and Oct., north in April and May. Casual in N. E.

521. NASHVILLE WARBLER.

Size of last, greenish above, yellow below, head bluish, white eye ring. Female,

Fig. 362



Lawrence Warbler. ♂.

duller; young, very dull. Breeds from Conn. to Canada and west to Ill.; winters in Mex.; south in Aug. and Sept.; north in May. Frequents open spots on margin of woodlands. Song, four or five harsh, quite rapidly given notes, *ewe*, followed by four in quite a different time, a kind of trill, *de*, ending abruptly, as if unfinished, uttered as bird perches high in tree. A restless species.

522. TENNESSEE WARBLER.

Size of last; greenish above, white below, head bluish, slight white line over eye, fig. 365. Breeds in northern N. E. north to Labrador, uncommon during migration east of Alleghanies and Hudson River Valley; winters in Central America, south in Aug., north in May. Song, a little like last, but first part in more divided and last shriller.

523. PROTHONOTARY WARBLER.

Larger, 5.40; greater part of head and beneath, rich yellow; back, orange green;

Fig. 363



Blue-winged Warbler, ♂.

rump and wings, bluish; spots on tail, white; no wing bands. Female, duller. Breeds in river bottom lands from Fla. to Va. west to Mississippi Valley. Casual in N. E. and New Brunswick; winters in northern S. A. south in Aug. and Sept., north in April. Song, loud and not unlike the *peet*

Fig. 364



Orange crowned Warbler.

tweet of the Spotted Sandpiper; also gives a flight song which is a low, sweet warble.

524. WORM-EATING WARBLER.

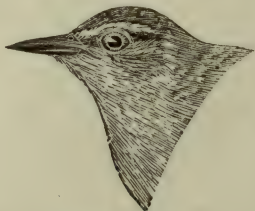
Size of last; greenish above, head and beneath, buff; stripe on sides of head and behind eye, black, fig. 366. Breeds from S. C. to southern N. Y. and Ind.; casual in

Mass., N. Y., Mich. etc.; winters in Fla., Bahamas, West Indies, and Mex. Song, a feeble trill. Frequents low lands, nesting on ground.

525. SWAINSON WARBLER.

Size of last; olive above, yellowish-white beneath; top of head, brown; line over

Fig. 365



Tennessee Warbler.

eye, buff. Frequents swamps. Breeds from Va. west to Ind.; south to northwestern Fla. and La.; winters in Jamaica, south in Sept., north in April.

526. KENTUCKY WARBLER.

5.50; greenish above, yellow beneath; portion of top of head and patch on its side,



Fig. 366.—Worm-eating Warbler.

black, fig. 367. Female, a little duller. Breeds in Mississippi Valley north of Ohio and east to western N. C.; casual north to Mass.

527. CONNECTICUT WARBLER.

5.50; wings, long; dark olive-green above, yellow beneath; head, throat and

Fig. 367



Kentucky Warbler. 1-3.

breast, ash-gray, mixed with black; eye-ring, white, fig. 368. Female, ashy of head and breast gray-brown. Breeding range as far as known Minn. and Manitoba; winter range unknown. South in Sept. and

Oct., when common in Mass. to N. J. and Bahamas; north in May. Frequents swampy thickets. Song, a low sweet warble; alarm, a very sharp note. Raises and lowers tail.

528. MOURNING WARBLER.

Smaller than last, wings shorter, differs otherwise in absence of eye-ring and in

Fig. 368



Connecticut Warbler. 1-3.

having more black on breast, fig. 369. Breeds from northern N. E., west to Mich., north to Canada; winters in north western S. A., south in Aug. and Sept., north in May. Frequents thickets on margins of

woodlands; very rare along Atlantic coast. Song, loud, clear and pleasing, suggesting that of the Water Thrush.

529. MARYLAND YELLOW-THROAT.

Size of last; wings short and rounded, gray-green above, conspicuous black mask

Fig. 369



Mourning Warbler.

on face which extends back on side of head, but not into a point on neck (white margined behind); throat and upper breast, yellow; reminder beneath, whitish. Female, without mask and not as yellow. Breeds on Atlantic coast of U. S. from Md., rarely

from Mass.; winters in Bahamas. Song, a varied warble. Frequents dry thickets, especially in winter.

530. NORTHERN YELLOW-THROAT.

Larger than last, yellow, extending into a point on side of neck, fig. 370. Breeds

Fig. 370



Northern Yellow-throat. 1-4.

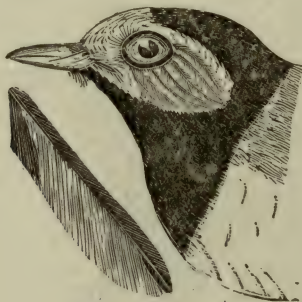
from N. E. west to Mich., north to Canada, south to Md.; winters from N. C. south to West Indies; south in Oct., north in April. Frequents swampy thickets. Song, *witch-ity*, repeated rather slowly five or six times; a warbling flight song, a continuous ratch-

like sound, given occasionally, probably by both sexes; alarm, harsh.

531. SOUTHERN YELLOW-THROAT.

Differs from last in having colors darker; deeper yellow below; sides, brown-

Fig. 371



Hooded Warbler.

ish. Breeds from southern Va. south to Fla.; winters from N. C to Key West, Fla.

532. HOODED WARBLER.

Larger, 525; black hood covering head leaving a yellow mask on face; greenish above, yellow below; tail, spots white, fig.

371. Female, duller. Breeds in eastern N. A. from southern Conn. to Fla.; winters, in Central America; south in Sept., north in April. Frequents high thickets in swampy places, notably rhododendrons. Song, loud and clear, not unlike that of Louisiana Water Thrush; alarm, sharp.

Fig. 372



Wilson Warbler. 1-3.

533. WILSON WARBLER.

Smaller, 5; golden-green above, green-yellow below; crown, black, fig. 372. Female, less black on crown. Breeds from extreme northern N. E. north to Labrador; winters in Central America; south in Aug. and Sept., north in April and May. Very

active, frequenting low growths, especially willows. Song, a trill, sometimes a low warble.

534. CANADIAN WARBLER.

Larger, 5.50, bluish above, yellow beneath; spots on crown; patch behind eye

Fig. 373



Canadian Warbler. 1-3.

and necklace of spots on breast (without pendants), black, figs. 373 and 374. Female, duller. Frequents swampy thickets. Song, a warble of from three to six disconnected notes. Breeds from elevated sections of Mass. south along mountains to N. C.; west

Fig. 374



Canadian Warbler.

to Central Minn.; north to Labrador. Winters in north-western S. A., south in Aug. and Sept., north in May.

535. REDSTART.

Size of last; black, with salmon patches on wings, sides, and tail, fig. 375. Female and young male, grayer with salmon replaced by yellow. Breeds from N. C. and Ark. north to Hudson Bay, west to Utah; winters in the Bahamas and West Indies; casually in S. C.; south in Aug. and Sept., north in May. Restless constantly flitting about and spreading tail. Song, a sharp trill-like warble of four to six notes, given rapidly and ending abruptly. Frequents margins of woodlands.

CHATS.

Large birds; wing short, rounded; tail, long, rounded; bill, short and rather thick. Sexes, similar. Songs varied, often mimicking those of other birds.

Fig. 375



Redstart.

536. YELLOW-BREASTED CHAT.

8.25; greenish above, yellow below; spot in front of eye, white; line in this from bill to eye, black, fig. 376. Breeds from Mass. west to southern Mich. and Wis. south

Fig. 376



Yellow-breasted Chat.

to N. C.; winters in Central America; south in Aug., north in May. Frequents thickets and low growths; shy and retiring, oftener heard than seen. Habits, somewhat wren-like, drops wings and raises tail. Notes much varied, whistles, chucklings, trills and

Oriole-like scolds; flight song, a series of whistling, *tutes*, given as the bird drops downward in jerks with wings thrown upward, tail down, and legs dangling.

Fig. 377



Ovenbird.

WOOD WAGTAILS.

Slender birds, with long wings and square tails, that are often moved up and down. Nests on ground. Sexes, similar.

537. OVENBIRD.

6; pale olive-green above, crown old gold color margined with black; white

beneath streaked with black, fig. 377. Breeds from Va. west to Kan., north to Hudson Bay; winters from middle Fla. to Bahamas, West Indies, Mex. and Central America; south in Sept., north in April. Frequents open woodlands. Song, *techee*, repeated five or six times with increasing volume; flight

Fig. 378



Water Thrush. 1-5.

song. a rapidly given sweet warble, often heard at night. Walks much on ground or on large lower limbs of trees.

538. WATER THRUSH.

Size of last, dark olive-brown above; line over eye and beneath, decidedly pale green; streaked below with black, fig. 378. Breeds from northern N.E. north to Hudson

Bay; winters in Key West, Bahamas, West Indies, Central America and northern S. A.; south in Aug. and Sept., north in May. Frequents swampy locations near water into which it wades sandpiper-like. Song,

Fig. 379



Louisiana Water Thrush.

several loud, clear notes, followed by a lower sweet warble; alarm, a sharp chirp.

539. GRENNELL WATER THRUSH.

Differs from last in being larger, more gray above and less green below, sometimes quite white. Breeds in western N. A. from

Minn. to Alaska; rare on Atlantic coast States from N. Y. south; winters in West Indies and Central America, migration as in last.

540. LOUISIANA WATER THRUSH.

Differs from Water Thrush in being a little larger, decidedly white over eye, white or buffy beneath, flanks and under tail coverts always buffy, fig. 379. Song, a rather uniform melody terminating more softly. Breeds from southern N. E. west to southern Minn., south to Gulf States; casual in Mass.; winters in Central America, Bahamas and West Indies; south in Sept., north in March and April.

541. WHITE WAGTAIL.

7; wings and tail, long; bill, slender; forehead, sides of neck, beneath and outer tail feathers, white; crown hind neck and throat, black; back, ashy. Breeds in Europe, accidental in Greenland.

542. PIPIT.

6.50, slender, wings and tail long, olive-gray above. streaked with darker; cinnamon buff beneath, streaked with black on breast and sides; outer tail feathers, white. fig. 380. Breeds from Newfoundland and mountains of Colorado, northward; winters from N. C.

Fig. 380



Pipit. 1-3.

to Mex.; south in Sept. and Oct., north in May. Frequents open fields, marshes and beaches. Gregarious. Call, a low double note like, *pipit*. Flight, undulating and erratic.

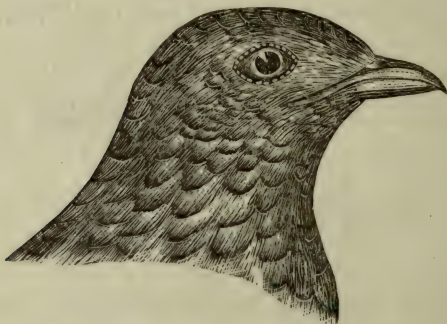
543. MEADOW PIPIT.

Differs from last in being darker above and below, and more heavily streaked above. Europe; accidental in Greenland.

544. SPRAGUE PIPIT.

Smaller than Pipit, paler beneath with narrow streakings and paler above. Breeds on interior plains of N. A. from Eastern Montana north to Manitoba; winters in

Fig. 381



Purple Martin.

Tex., Mex. and southern La.; rare in N. C. Flight song. a clear, harmonious melody, given as bird hovers in air.

S W A L L O W S .

Wings, long; bills, short; tails, variable but often forked. Eggs, white.

545. PURPLE MARTIN.

Large, 8.25; tail, somewhat forked; appearing black throughout, fig. 381. Female, lighter above, nearly white beneath. Breeds throughout temperate N. A.; winters in Mex. and northern S. A.; south in Sept.,

Fig. 382



Cliff Swallow.

north in April. Nests in holes of trees and bird boxes; eggs, unspotted. Flight strong, but heavy, often ascends high in air. Notes loud, clear, and melodious.

546. FLORIDA MARTIN.

Differs from last in being smaller and darker; female, more grayish beneath.

Breeds in middle and southern Fla.; north in March.

547. CUBAN MARTIN.

Differs from last in having a more deeply forked tail; female with white spot on abdomen.

Fig. 383



Bank Swallow.

548. CLIFF SWALLOW.

Smaller, 5.75; tail, square; above and spot of breast, deep steel blue; crescent on forehead and rump, red-buff; throat, chestnut; white beneath, fig. 382. Breeds throughout the greater part of N. A.; winters in S. A.; south in Sept., north in April. Nests in communities under eaves of buildings

and on cliffs; eggs, spotted. Notes, a musical chatter. Flight, rather heavy.

549. CUBAN CLIFF SWALLOW.

Differs from last in having throat pale and rump deep chestnut. Cuba, resident; accidental on Fla. Keys.

Fig. 384



Rough-winged Swallow.

550. BANK SWALLOW.

Small, 5.25; brown above, white beneath, band of brown crossing breast, tail slightly forked, fig. 383. Breeds through northern hemisphere; in N. A. from Ga. and northern Mex. north to Arctic; winters in S. A.; south in Sept., north in April and

May. Nest in communities in holes of sand banks; eggs, unspotted. Notes, a single twitter. Flight, quite weak.

551. ROUGH-WINGED SWALLOW.

Differs from last in having throat brown, fig. 384. Breeds in temperate N. A.

Fig. 385



Tree Swallow.

from Central America north to southern Conn., western Mass. and British Columbia; winters in Central America; south in Sept., north in May. Nests in holes of bridges, banks, buildings, etc., seldom in communities. Note, a feeble twitter. Flight, not very strong.

552. TREE SWALLOW.

Larger, 6; tail, with medium fork; blue above, white below, fig. 385. Female, duller; young, brown above. Breeds from Va. and Cal., north into British America; win-

Fig. 386



Barn Swallow.

ters from S. C. through Gulf States and occasionally further north; south in Sept. and Oct., north in April. Nests in holes of trees, bird boxes, or in cavities about buildings. Flight, easy, and rather graceful.

Song, a pleasant chatter. Gregarious in autumn, congregating by thousands on seashore.

553. BAHAMA SWALLOW.

Size of last, green above, white below; tail, more deeply forked. Female, duller. New Providence, Andros, and other islands of Bahamas; accidental in Fla. Song, a musical twitter. Nests in holes of trees and in cavities about buildings.

554. BARN SWALLOW.

Larger, 7; steel blue above; forehead, throat and breast, chestnut; remaining lower parts, rich brown; tail, deeply forked and crossed by a band of white spots, fig. 386. Female, duller. Breeds throughout N. A. from Arctic to Gulf and into Mex., excepting Fla.; winters in S. A.; south in Sept., north in April. Nests inside buildings and rarely beneath their eaves. Song, a pleasing, bubbling, joyous melody. Flight, very graceful and easy.

555. EUROPEAN SWALLOW.

Differs from last in having a dark band across breast. Europe; accidental in Greenland.

W A X W I N G S .

Wings long, pointed, folding beyond tip of short square tail. Plumage very

Fig. 387



Cedar Waxwing. 1-4.

smooth and blended. Nests in trees, eggs, spotted.

556. CEDAR WAXWING.

7.25; crested; wood-brown above; lighter on upper tail coverts; black on chin,

brown on breast, lighter behind this, white on under tail coverts; tip of tail yellow; secondaries tipped with red (often absent), fig. 387. Breeds in temperate N. A. from Va. north to Hudson Bay; in winter wandering irregularly south to Fla. Gregarious.

Fig. 388



Bohemian Waxwing. 1-4.

Flight, strong, steady direct with a peculiar flutter of wings. Note, a rather low, hissing chirp.

557. BOHEMIAN WAXWING.

Differs from last in being larger, 7.75; grayer, yellow or white lines on tips of

wing feathers, white spot on wing, chestnut under tail coverts, fig. 388. Breeds in coniferous forests of northern Hemisphere; wandering south in winter, irregularly to northern U. S. Notes, similar to those of last, but louder.

Fig. 389



Scarlet Tanager. 1-4.

T A N A G E R S .

Rather small birds with thick, finch-like bills and long wings.

558. SCARLET TANAGER.

7.50, scarlet; wings and tail, black, fig. 389. Female and winter male, scarlet, re-

placed by greenish. Breeds in eastern U. S. from Va. north into southern British Provinces; winters, in northern S. A.; south in Sept. and Oct., north in May. Frequents open woodlands. Flight, swift and direct. Song, loud and distinct, *chip cherry, cherry chip*, varied somewhat, sometimes sweet and pleasant, but often marred by a burred intonation; alarm, *chip cher*, accented on first syllable, the last a little prolonged, somewhat burred. Nests, slight structures placed in trees; eggs, green, spotted.

559. LOUISIANA TANAGER.

Differs from last in having back black, two bands on wing, hind neck, rump, upper tail coverts and beneath, yellow. Female, differs chiefly in having yellow wing-bands. Breeds in western U. S; accidental in N. E., N. Y. and La.; winters in Mex.

560. SUMMER TANAGER.

Size of last; dull red throughout. Female, yellow-green. Breeds in eastern U. S.

from southern N. J. south to Gulf States; casual as far north as Nova Scotia; winters in northern S. A.; south in Sept., north in April. Song, loud and clear.

SHRIKES.

Bill, large and hooked; wings short, tail long and rounded.

Fig. 390



Northern Shrike.

561. NORTHERN SHRIKE.

Large, 10; pale gray above; white beneath, where finely banded with black; patch on side of head, black; markings on back, patch on wing and tips of tail, white, fig. 390. Young much obscured above with

rusty. Breeds in northern N. A. from Labrador to Alaska, wandering in winter somewhat irregularly as far south as Va. and Central Cal. Song, a loud, clear and varied melody; note of annoyance, a harsh cry. Frequents open fields. Flight, swift,

Fig. 391



Loggerhead Shrike. 1-6.

direct, but with long, sweeping undulations; always raises to alight. Sits very upright.

562. LOGGERHEAD SHRIKE.

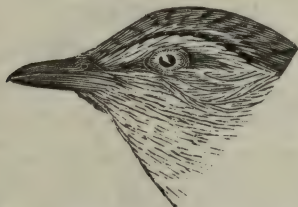
Smaller, 9.25, differs from last in having head patches meeting on forehead in a narrow line and in being clear white beneath,

fig. 391. Resident in coast districts of S. C. and Ga., west to La. and all of Fla.

553. NORTHERN LOGGERHEAD.

Differs from last in being paler above and slightly gray beneath. Breeds over a greater portion of eastern U. S. from N. C. and eastern Kan. north to the more south-

Fig. 392



Red-eyed Vireo.

ern British Provinces; south in winter to La. and Tex.

VIREOS.

Small, arboreal birds, with large heads and bills; rather deliberate movements; food, insects, chiefly caterpillars. Colors, mostly plain. Nests, suspended from a

forked twig; eggs, white, usually sparingly spotted.

564. RED-EYED VIREO.

Large, 6.25; top of head, gray; dark line through eye, white line over it, bordered by a black line above; gray green above, white below, fig. 392. Breeds throughout temperate N. A. from Fla. into British Provinces; winters in northern S. A.; south in Sept. and Oct., north in May. Frequents woodlands. Song, a monotonous repetition of the syllables, *hear me, see me, hear it; heed it; sweet william, sweet it, tweet tweet tweet tweet*, quickly given at the rate of thirty-six or more notes to the minute; also the common Vireo scold.

565. BLACK-WHISKERED VIREO.

Larger than last, bill longer, dark lines on head not as clear, and a slight maxillary line of dusky. Breeds in the Bahamas and southern Fla.; winters in West Indies; north in April. Song, *whip tom kelley*—a decided

accent on *kelly—phue*, but varying somewhat. Nest often placed low.

566. PHILADELPHIA VIREO.

Smaller, 5; grayer than Red-eye, lines on head distinct; strongly tinged, with yellow beneath. Breeds from northern N. E. north into British Provinces; winters in

Fig. 393



Warbling Vireo.

Central America; south in Sept. and Oct., north in May. Rare east of Connecticut River and Alleghanies. Song, similar to Red-eye.

567. WARBLING VIREO.

Larger than last, 5.40, grayest of our Vireos, slight whitish line over eye, white beneath with a slight yellow tinging, fig.

393. Breeds in eastern N. A. from Fla. north into British Provinces; winters in Mex.; south in Sept., north in April. Frequent open groves or ornamental trees in villages. Song, a continuous warble of about six notes, ending abruptly. Nest, placed high in tree.

Fig. 394



Yellow-throated Vireo.

568. YELLOW-GREEN VIREO.

Greener above than last and much more yellow beneath, especially on sides and under tail coverts. Mex. and southward; accidental in Quebec.

569. YELLOW-THROATED VIREO.

6; white wing bands, green above and on sides of head; line over eye, throat and breast, lemon-yellow; remaining lower parts, white, fig. 394. Breeds in eastern N. A. from northern Fla., north to British Provin-

Fig. 395



Solitary Vireo.

ces; winters in Colombia, S. A; south in Sept. and Oct., north in May. Frequents margins of woodlands, orchards and open groves. Song, *do you hear me; do you see me; hear I am*, given with emphatic energy, slightly burred, repeated eight or ten times a minute. Nest, covered with lichens.

570. SOLITARY VIREO.

Smaller, 5.50; top of head, dark slate; back, dark green; ring around eye and line from it to bill, white; wing bands and sides, tinged with yellow, fig. 395. Breeds locally in southern N. E., but more commonly from northern N. E., north into British Provinces; winters in Gulf States, south into Central America. Song, shorter and lower than last, and given with less energy; a peculiar note like *swe-e-we*, usually characterizes this song. Frequents woodlands.

571. MOUNTAIN VIREO.

Differs from last in being larger, darker with more gray on back. Breeds in southern Alleghanies from Md. to N. C.; winters in lowlands of the eastern Gulf and south Atlantic States.

572. PLUMBEOUS VIREO.

Differs from last in having back wholly gray and less yellow beneath. Rocky

mountains of U. S. and mountains of Mex., accidental in N. Y.

573. WHITE-EYED VIREO.

Smaller, 5.25; green above, white beneath, much tinged with yellow; line from bill over eye, eye-ring and wing bands, sulphur yellow; iris white, fig. 396. Breeds

Fig. 396



White-eyed Vireo.

in eastern U. S. from northern Fla. and Tex., north to Mass. and southern Wis.; winters from S. C. to Central America, south in Sept., north in May. Song, varied detached notes given emphatically, *I-will-give-you-a-lick*, is an example, sometimes these notes are run together as a low, continuous song.

574. KEY WEST VIREO.

Differs from last in being larger, much grayer above and on sides of head, fig. 397. Breeds from Middle Fla. south to Key West.

575. BERMUDAN VIREO.

Differs from last in being much more gray with little yellow on sides. Bermuda Islands.

Fig. 397



Key West Vireo.

576. BELL VIREO.

Smaller, 4.75; head, gray-brown; back, dull olive green; line over eye, ring around it, wing-bands and beneath, white, much tinged with yellow below. Breeds in prairie districts of Mississippi Valley from southern

Minn. to northern Ill., south to eastern Tex.; winters in Mex., accidental in Mass.

MOCKINGBIRDS AND THRASHERS.

Large birds, with short wings and long unbanded tails; bills, slender; sexes, similar.

Fig. 398



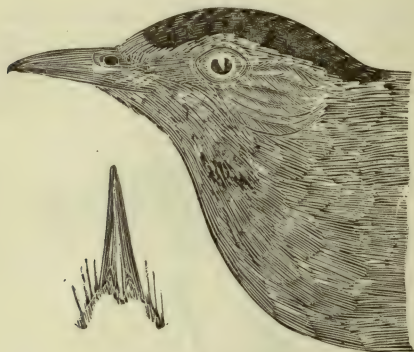
Mockingbird. 1-5.

577. MOCKINGBIRD.

Larger, 10; ashy-gray above, white beneath; large patch on wing, and tips of outer tail feathers, white; iris, pale yellow,

fig. 398. Resident from Mex. north to Mass and Cal. Frequents thickets. Song, loud, clear and varied, often mimicing songs of other birds. Nests in bushes; eggs, spotted.

Fig. 399



Catbird.

578. CAT BIRD.

Smaller, 9; dark plumbeous; top of head and tail, black; under tail coverts, chestnut, fig. 399. Breeds in eastern U. S. from Gulf States north into British Provin-

ces, west to Rockies; winters in southern States, casually north to mass.; south in Sept. and Oct., north in April and May. Frequents thickets, often near dwellings. Song, rich and varied, sometimes mimicing other birds; notes, rather deliberately given. Nests in thickets, uses grape vine bark outwardy; eggs, green-blue.

Fig. 400



Brown
Thrasher. 1-6

579. KEY WEST CATBIRD.

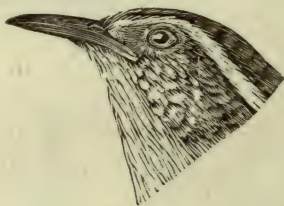
Smaller than last; darker, but with forehead grayish. Key West, Fla.

580. BROWN THRASHER.

Larger, 11.50; bright red-brown above; wing-bands and beneath, buff-white; streaked on side of neck, breast and sides with brown. fig. 400. Breeds throughout eastern U. S.; winters from N. C. southward to Fla.; south in Oct., north in April and May.

Frequents dry thickets. Song given when perched in an elevated situation, loud and varied each phrase repeated, like *plant it plant it, hoe it hoe it, dig it dig it*, etc. Sits upright when singing. Nests placed on ground or near it, built of sticks, lined with

Fig. 401



Carolina Wren.

rootlets, eggs pale blue, sprinkled thickly with rufous.

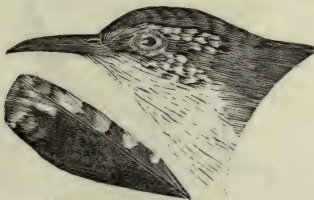
W R E N S .

Small birds, with slender bills, brown above, white below; usually banded on tail and wings with black, often keep tail erect.

581. CAROLINA WREN.

Large, 5.25; rust-brown above; line from bill over eye, down neck, buffy white; narrow line over this, black; throat and beneath, white, fig. 401. Breeds from northern Fla. north to southern N. E., rarely to Mass., west to Middle Kan.; winters

Fig. 402



Berwick Wren.

from N. C. southward, sometimes north to Mass. Frequents low thickets. Song, loud, clear and varied; often mimics other birds.

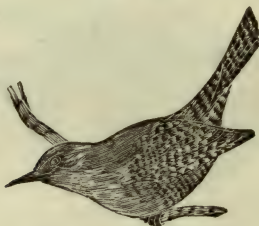
582. FLORIDA WREN.

Differs from last in being larger and much darker both above and below. Peninsula of Florida.

583. BEWICK WREN.

5.50; tail long, plain brown above; line over eye, conspicuous spot on tail, and beneath, white, fig. 402. Breeds throughout eastern U. S. from N. J. west to southern Mich., south to northern Fla. and Tex.; winters in southern portion of range; south

Fig. 403



House Wren. 1-4.

in Sept.; north in May, accidental in N. H. Frequents open sections. Nests in holes about buildings. Song, a continuous, bubbling melody.

584. HOUSE WREN.

Smaller, 5, dark red-brown above, white beneath, in addition to wings and tail,

flanks barred with dusky, fig. 403. Breeds throughout eastern U. S. north into Canada; winters from N. C. through Gulf States; south in Sept. and Oct., north in May. Frequents orchards. Nests in holes of trees and about buildings. Song, a continuous,

Fig. 404



Winter Wren.

bubbling melody. In autumn and winter, seeks the shelter of brush heaps and thickets.

585. WESTERN HOUSE WREN.

Differs from last in being much paler with back usually barred with dusky. Breeds throughout western U. S. and Canada east to Ill.; winters in Mex.

586. WINTER WREN.

Differs from last in being smaller, 4.10, pale brown beneath, and much spotted and banded with black; upper back and sides of neck spotted with white, fig. 404. Breeds in northern portion of eastern U. S. and Canada, from western Mass. and south along Alleghanies, to N. C. west to Mich.; winters from Mass. to northern Fla., and along Gulf coast to Tex.; south in Sept. and Oct., north in April. Frequents dense thickets along walls and fences, remaining much in concealment. Song, given from tree tops, begins with an abrupt outbreast of melody, then falls and rises like the tinkling of fairy silver bells now near now far, producing one of the most exquisitely beautiful bird songs heard in the north woods. Nest, on ground, formed of moss, etc.

588. LONG-BILLED MARSH WREN.

Larger, tail much rounded; red-brown on head, darker on back; line over eye,

streaks on back and beneath, white; tail, barred with dusky, wings with white, fig.

405. Breeds chiefly east of Alleghanies, from Va. and Md. north to western N. Y. and Mass.; winters from N. C. south to Fla.; south in Sept. and Oct., north in May. Frequents very wet marshes. Nests attached to reeds, grass stems and bushes. Song, often given in flight, a bubbling melody rising and falling; sometimes one outburst connected with next by tinkling notes. Flight, weak and fluttering.

Fig. 405



Long-billed
Marsh Wren.

588. MARIAN MARSH WREN.

Differs from last in being smaller, much darker and more heavily banded. Breeds on coasts of Carolinas; winters in western Fla.

589. LOUISIANA MARSH WREN.

Differs from last in being smaller and paler; crown with median stripe often broad. Coasts of La. and Tex.

590. WORTHINGTON MARSH WREN.

Smallest and palest of the Marsh Wrens, being quite gray with white streakings. Atlantic coast from S. C. to northern Fla.

Fig. 406



Short-billed Marsh Wren.

591. PRAIRIE MARSH WREN.

Differs from Long-billed in being much more rusty brown above and on flanks. Great Plains and Prairie districts of Central U. S.; southward in winter along Gulf coast to western Fla.

591. SHORT-BILLED MARSH WREN.

Differs from Long-billed in being smaller and in having top of head as well as back streaked with white, fig. 406. Breeds in eastern N. A. from southern N. H. and Manitoba south to Gulf Coast. Frequents

Fig. 407



Brown Creeper.

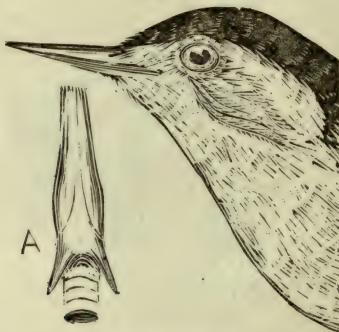
sedgy, not very wet, marshes in summer, dry savannahs in winter. Song, an off-repeated tinkle somewhat like the sound produced by a light hammer striking an anvil with a sharp blow, then rebounding three or four times, never given on wing;

more often heard during cloudy weather or by night.

593. BROWN CREEPER.

Small, 5.50; slender with long, strongly curved bill, long wings and tail which has

Fig. 408



White-breasted Nuthatch.

pointed feather tips; brown above, streaked with white; white beneath; rump, rusty, fig. 407. Breeds in eastern N. A. from Mass. north into British Provinces, south along mountains to N. C.; winters from N. E. to Fla.; south in Oct., north in April.

Frequents open woodlands, groves and ornamental trees everywhere. Creeps spirally up trees, than drops to base either of same tree or another to reascend. Flight, swift and direct. Usual note, a thin sharp lisp; also a crackling cry, and a not commonly heard silvery, tinkling song.

N U T H A T C H E S .

Small birds with straight bills, long wings and short tails. Climb trees something like Woodpeckers, but descend head downwards. Nests in cavities often excavated by the birds; eggs white, spotted.

594. WHITE-BREASTED NUTHATCH.

Large, 6; blue-gray above; top of head and hind neck, black; beneath, white, fig. 408. Female, with crown blue like back. Breeds throughout eastern U. S. into Provinces, south to northern N. C. west to Great Plains, chiefly resident. Frequents woodlands, orchards, and ornamental trees. Usual call, a harsh *cach*, also an interrupted series

Fig. 409



Red-breasted Nuthatch, ♂.

of calls given in a rather minor tone, suggesting the familiar call of Flicker.

595. FLORIDA WHITE-BREASTED
NUTHATCH.

Differs from last in being smaller and darker. Female, head black or nearly so. Fla. west along Gulf coast to Miss.

596. CAROLINA NUTHATCH.

Differs from last in being a little lighter with the red of sides not as extended. Female with crown very slightly obscured with plumbeous. Coast region of the Carolinas. Described in Records of Walks and Talks with Nature, Vol. VIII, Jan. 12, 1916.

597. RED-BREASTED NUTHATCH.

Smaller than last, 4.50; differs otherwise in having a black line through eye, broadening out behind it, hind neck like back and strongly tinged with red-brown beneath, fig. 409. Female has head line bluish and is lighter below, fig. 410. Breeds in forests

Fig. 410



Red-breasted Nuthatch. ♀.

of northern N. A. from Mass. to Labrador; south along higher Alleghanies to N. C.; winters from Mass. to extreme southern States; south in Aug., Sept. and Oct., north in April. Notes, quite different from White-breasted, more clear, like the tooting of an elfen horn. Found nearly everywhere, but most common in woodlands.

598. BROWN-HEADED NUTHATCH.

Small, 4; differs from last in absence of line through eye, brown head and nape and white under parts. Sexes, similar, fig. 411. Resident in pine belt from southern Del. to Tex., casually north to N. Y., Mich., etc.; Great Bahama Island. Note, a harsh, solemnly given *cach*, often repeated. Gregarious.

K I N G L E T S .

Very small arboreal birds, with deeply notched tails; crown, with a brightly-colored spot; wing with single band of white in dark area. Globular nests in trees; eggs, spotted.

Fig. 411



Brown-headed Nuthatch.

599. GOLDEN-CROWNED KINGLET.

3.50; gray-green above, white beneath; top of head, orange, with yellow and black line on either side, fig. 412. Female, has crown between black lines yellow, fig. 413. Young, has yellow replaced by gray, fig. 414. Breeds from northern N. E., northern N. Y. and northern Mich. north to Labrador; rarely south to Mass. and regularly along Alleghanies to N. C.; winters from Mass. to northern Fla. Found everywhere, most commonly in evergreen woods. Restless flitting constantly about, often flicking wings. Song, a rather feeble, lisping trill; alarm, a feeble lisp.

600. RUBY-CROWNED KINGLET.

Differs from last in absence of black line on head; male with partly concealed ruby spot on crown, fig. 415; absent in female, fig. 416. Breeding range in east, similar to last, but winters further south to southern Fla. and Mex., rarely in Mass.;

Fig. 412



Golden-crowned Kinglet, ♂.

south in Sept. and Oct., north in April. Song begins with a few lisping notes, runs into a clear, high warble, remarkably loud for size of bird. Occurs mostly in woodlands.

601. BLUE-GRAY GNATCATCHER.

Larger, 4.75; blue-gray above, bluish-white below; U-shaped line on forehead, black; patch on either side of tail, white, fig. 417. Breeds from N. J. west to northern Mich., south to Gulf States; casual in N. E. and Minn.; winters in Gulf States, Bahamas and West Indies. Nest in trees, hung from fork of limb, lichen-covered; eggs, spotted. Call note, *see see*, lispingly given; song, a low, tinkling, silvery warble. Very restless and active.

THRUSHES.

Well proportioned Singing Perchers of wide distribution and fine powers of song; eggs, blue-green.

602. WOOD THRUSH.

Large, 8.25; red-brown above, brightest on head; white beneath, marked everywhere

Fig. 413



Golden-crowned Kinglet, ♀.

with large, round spots of black, fig. 418.
Breeds in eastern U. S. from Va. and Kan.,

Fig. 414



Golden-crowned Kinglet, young.

north to Canada; south in Sept., north in May. Frequents wooded glens. Song, loud, clear and bell-like, *tru-ral lu tru-ral lee*, varied with lower notes; alarm, a harsh, stuttering cry. Nests in trees; eggs, unspotted.

Fig. 415



Ruby-crowned Kinglet, ♂. 1-4.

603. HERMIT THRUSH.

Smaller, 7; differs from last in being more tawny above, brightest on tail, white beneath, tinged with cream on breast, spots triangular and confined to breast; eye-ring, creamy, fig. 419. Breeds in eastern N. A. from Mass., northern Alleghanies and northern Mich. northward; winters from southern N. E. south to Fla.; south in Oct., north in

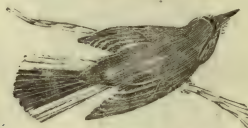
Fig. 416



Ruby-crowned Kinglet, ♀.

April. Song, the most finished of that of all our birds. There are four strains: 1, *Oh twee twee twee*, clear and high; 2, *E. twter twter twter*, lower but pure; 3, *Oh phera phera phera*, lower in tone almost pathetic in terminal note. all prolonged; 4, *E. che te wete*, softly given, often whispered. The above is the order in which the complete

Fig. 417



Blue-gray Gnatcatcher. 1-4.

song is given, but strains are frequently omitted. Alarm, a whistled *chuck*. Frequent woodlands. Nests on ground; eggs, unspotted.

604. OLIVE-BACKED THRUSH.

Differs from last in being uniform olive above, strongly tinged on head and eye-ring with rufous, spots beneath broadly trian-

gular and not as prominent, fig. 420. Breeds in eastern N. A. northward; winters in S. A.; south in Sept. and Oct., north in April and May. Song, *tru-ral ru-ral lee*, a variation is, *ru-ral-e-ral e-e*; both given with a very thrush-like intonation; alarm, a short liquid *quit* and one like *pit*, more quickly given. Nests in bushes; eggs, spotted.

605. GRAY-CHEEKED THRUSH.

Differs from last in having side of head and eye-ring gray, and little or no tinging on breast. Breeds in northern N. A. from Newfoundland, north to Arctic; winters in Central America; south in Sept. and Oct., north in May. Frequents woodlands and copses. Song, as heard in West Newton, Mass., in spring; almost exactly like that of Veery, but lower.

606. BICKNELL THRUSH.

Differs from last in being smaller. Breeds on higher mountains of northeastern States and Nova Scotia. Migration as in

last. Song, as heard on Mt. Graylock, May 29, 1910, *wher re re e*; one bird song, *whee er rel re*, all given in about the same time as the Olive-back. A preliminary note

Fig. 418



Wood Thrush.

to the song, was a very liquid *pit*; sometimes *pit cree* was given, possibly by female.

607. WILSON THRUSH.

Size of Hermit; reddish tawny above, white beneath; eye-ring sides of head and

breast, pale-buff; spots confined to upper breast and very pale, fig. 421. Breeds from northern N. J. west to northern Mich., north into British Provinces, winters chiefly south of U. S. Song, a series of fife-like notes, beginning softly, gradually decreasing in volume, and ending imperceptibly; alarm

Fig. 419



Hermit Thrush.

a loudly whistled *pheu*. Nests on ground; eggs, unspotted.

608. NEWFOUNDLAND THRUSH.

Differs from last in being paler above and more indistinctly spotted below. Breeds in Newfoundland.

609. WILLOW THRUSH.

Differs from Wilson in being duller above; markings below, darker. Interior of U. S. and British Provinces, east to Wis. and Ill., Ind., casually to S. C.

Fig. 420



Olive-backed Thrush.

610. RED-WINGED THRUSH.

Larger, 8.50, brown above; line over eye, stripes on throat and middle portions below, white; sides and flanks, reddish; breast streaked with black. Northern Europe and Asia; accidental in Greenland.

611. AMERICAN ROBIN.

Larger, 10, gray above; top of head, black; golden brown beneath; throat, white, streaked with black; bill, yellow, fig. 422. Female, duller. Nestlings, spotted with black above and below. Breeds in eastern

Fig. 421



Wilson Thrush.

N. A. from Atlantic to Rockies north of N. C.; winters from Canada to Gulf States, south in Oct. and Nov., north in March and April. Found everywhere. Song, loud and hurridly given; variable, but a usual form is *chip cherry chip*, with other notes, a single

sharp whistle of inquiry. Young, when fully fledged, give a practicing song similar to adult; uttered with closed bill, and thus low and muffled. Nests in trees and bushes,

Fig. 422



American Robin.

sometimes within buildings or about them; eggs, unspotted.

612. CAROLINA ROBIN.

Similar to last, but smaller, paler and duller. Young, less heavily spotted. Breeds

in S. C. and northern Mich., north to Md. and southern Ill.

613. TOWNSEND SOLITAIRE.

Smaller than last, plain brown-gray, two red-buff patches on wing with a darker intervening space; tail with small white spots, at tip. Mountains of western N. A., accidental in Ill.

614. GREENLAND WHEATEAR.

Smaller, 6.50, ashy-gray above; terminal third of tail, black; remainder with tail coverts, forehead, line over eye, and lower parts behind, white; otherwise, plain buff below; patch on side of head, black. Breeds in Iceland, Greenland and Labrador, straggling south to Nova Scotia, Me., Mass., N. Y. and Bermuda, accidental in La.; winters in northern Africa, Labrador birds reaching winter quarters via Greenland and the British Isles.

615. BLUEBIRD.

Larger, 7, blue above; breast and sides, cinnamon-brown; remaining lower parts, white, fig. 423. Female, duller. Nestlings spotted above with white and wholly white

Fig. 423



Bluebird.

below, streaked with red-brown. Breeds from Ga. north to British Provinces, west to Rockies; winters from Middle States to Gulf Coast; south in Oct. and Nov., north in Feb. and March. Frequents open country. Call song of three notes, often repeated,

cheer-e-ly, given by both sexes and young; song by male, a low, sweet warble, uttered sometimes in flight or when perched with fluttering wings. Catches insects on ground, but flies to perch to eat them. Flight, rather indirect and wabbly. Nests in holes of trees or in boxes; eggs, pale blue, usually unspotted.

616. FLORIDA BLUEBIRD.

Deeper in color above and below than last. Resident in Fla.

Appendix

The following species, chiefly accidental visitors, should be included as birds of our section.

EARED GREBE.

About the size of Horned Grebe, but bill smaller. Conspicuous cinnamon ear tufts in adult. Young and winter plumage, scarcely different. Western U. S.; casual in Indiana.

SHORT-BILLED GULL.

Differs from Ring-billed Gull in being darker above; no band on bill, which is green, with tip yellow, and shorter. Difficult to distinguish in field in young stages.

PINTADO PETREL.

Large, 15; head, wings, tip of tail and mottlings on back, black; otherwise, including patch on wing, white. Southern Oceans, accidental off coast of Me.

ALLIED SHEARWATER.

Smaller than Audubon Shearwater, with black of head not extending below eye. Australian seas; accidental on Sable Island, N. S.

HAWAIIAN PETREL.

Similar to Leach Petrel, but with tail less forked. Pacific Ocean; accidental in Ind. and District of Columbia.

RUDDY SHELDRAKE.

Size and general color of Mallard, but with a knob at base of bill. Old world; accidental in Greenland.

BEAN GOOSE.

Size of white-fronted Goose, but differs in having an orange band on middle of bill, in being darker without white on face, or black spots on breast; legs and feet, orange. Old World; accidental in Greenland.

PINK-FOOTED GOOSE.

Differs from last in being smaller. 28: patch on bend of wing, gray: upper mandible, pink in center. Old world; accidental in Greenland.

WAYNE CLAPPER RAIL.

Scarcely to be distinguished from Clapper Rail in the field. Salt marshes of Atlantic coast from N. C. to Fla.

HUDSONIAN SPRUCE PARTRIDGE.

Similar to Spruce Grouse, but darker. Labrador and westward in same latitude.

BERMUDA GROUND DOVE.

Similar to Bahama Ground Dove, but smaller and with bill wholly black. Bermuda.

GROOVED-BILLED ANI

Bill grooved, scarcely different in field from Ani, S. A., north to Tex; casual in Fla.

FLORIDA CROW.

Bill larger than in Crow, difference in field almost inperceptable. Florida.

HOODED CROW.

Differs from Crow in being gray on back and under parts. Europe; casual in Greenland.

ROOK.

Resembles Crow, but differs in having no feathers about base of bill, where skin is whitish. Europe; accidental in Greenland.

CLARK NUTCRACKER.

Size of Blue Jay; bill, longer and pointed; gray wings, and tail black; patch on former and outer feathers of latter, white. Western N. A.; accidental in Wisconsin.

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ADDENDA.

RICHARDSON OWL—

Larger than Saw-whet Owl, 9, and differs in color in being darker and in having five lines of white spots on tail. Breeds from Gulf of St. Lawrence northward, rarely wandering South in winter into northern U. S.

VARIED THRUSH—

Differs from Robin in absence of black on crown and streak on throat with wing bands, line over and behind eye, and beneath brownish yellow; band across breast, patch on sides of head, black. Pacific coast, accidental in N. J., N. Y. and Mass.

CORRECTIONS: page 307, 3rd line from bottom, for FLOUDA, read FLORIDA.

Page 362, first line, for TROPICAL read TROUPIAL.

THE END.

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